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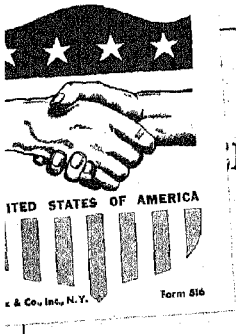

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Educational News and Editorial Comment

A STUDY OF FEDERAL RELATIONS TO EDUCATION IN THE STATES

Last autumn President Roosevelt appointed, under the chairmanship of Floyd W. Reeves, professor of education, University of Chicago, a committee to make an extensive study of the relation of the federal government to vocational education. Some months ago the personnel of the committee was enlarged, and the scope of its inquiry was extended to cover the whole subject of federal relations to state and local conduct of education. The membership of the committee represents a diversity of backgrounds and interests—professional education, the federal government, business, labor, public administration, home economics, and agricultural economics.

The following statement concerning the work of the Advisory Committee on Education is quoted from an address given by Dr. Reeves before the National Education Association at its convention in June.

Since the committee's assignment calls for a completed report by next December, the committee has been forced to move rapidly. It is expected that the major part of the staff work for the committee will be completed during the next three months.

Plans have been developed for brief but comprehensive studies of the financing of education, of educational administration as a major phase of state govern-

ment, of the quality of existing educational programs in the states, of the new and emergency federal education programs, of education in special federal jurisdictions, and of the social, economic, and governmental factors basic to a consideration of federal relations to education. . . . .

In the nature of the case it will be impossible for the committee to carry on elaborate researches. The time is too short. Our objective is to organize effectively the results of the professional thinking and the research studies that have already been completed. In other words, we intend to skim the cream off of the work that has already been done.

One exception to this procedure should perhaps be mentioned. The organization of educational administration as a phase of state government has been studied relatively so little and is of such major importance to the determination of whether and how federal aid should be provided for public education that we are concentrating a great deal of effort on studies of this subject. For several weeks we have been engaged in making detailed plans for field studies of state educational administration. We have assembled a staff to make those field studies under Dr. Walter D. Cocking's direction that includes men who have recently served in, or who have been borrowed from, the state departments of education in Connecticut, Virginia, Michigan, Tennessee, Missouri, and Texas. These men will be out on circuits of visits to state departments from now until late August. We hope to obtain needed information through direct inquiries in each of the forty-eight states. . . . .

Definite arrangements are being made for the co-operation of a number of important federal agencies. The National Resources Committee will co-operate in studies of the social and economic aspects of federal relations to education. We are consulting closely with the Advisory Committee of the National Youth Administration in our studies of the program of that agency. The Office of Education in the Department of the Interior is assigning certain of its personnel to make studies needed by our committee and will make available its collection of research materials bearing upon federal relations to education, the most extensive collection of such materials in the United States. We also expect to consult frequently with the Commissioner of Education, Dr. John W. Studebaker.

Plans are also under way for co-operation with the numerous nongovernmental organizations and agencies that are in a position to make an important contribution to our studies. These plans are already rather definite in a number of cases.

The American Youth Commission is now engaged in an extensive survey of the educational work of the Civilian Conservation Corps. An agreement has been reached by which the Youth Commission will expedite certain phases of this survey in order that the findings may be available in time to be of service to our committee.

The Council of Chief State School Officers, which as you know includes the heads of departments of education in each of the forty-eight states, has extended

its full co-operation and has been of major assistance in planning the field studies for the committee.

The Educational Policies Commission of the National Education Association was already making plans for a survey of educational administration throughout the United States when it became apparent that the Advisory Committee on Education would have a major interest in this subject. Representatives of the two groups met in a conference in Washington on June 12, and a working relationship was agreed upon that should enhance greatly the value of the studies to be made by each group.

Here and There among the Schools

The *Elementary School Journal* has adopted the policy of reporting, from time to time, significant innovating educational practices. This policy will be continued during the current year. Superintendents, principals, and teachers are invited to submit to us accounts of new approaches to the solution of their problems with the view of making the information available to other workers in the field. The information desired may concern almost any aspect of the school—the curriculum, methods, provisions for individual differences, administration, supervision, housing, equipment, and community relations. It is to be assumed, of course, that the *Journal* does not necessarily approve of all the practices which we report.

The cadet-teacher plan in Wilmington, Delaware.—Teachers' colleges and other institutions concerned with the education of teachers in this country have never been able to provide any large number of their students with satisfactory opportunity to do practice teaching. It is true that most teacher-education institutions have their own training schools or make some arrangement whereby their students may do practice teaching in the public schools of the community. In this way young, prospective teachers are able to get some experience in observing others teach and in teaching under expert supervision, but it is doubtful whether many of them acquire anything like an adequate mastery of the teaching technique necessary for the direction of the learning processes of the children committed to their care. It has long been our conviction that most public-school authorities have refused to assume their proper responsibility in the guidance and direction of young teachers. Schools of education, like schools of medicine, cannot, in the nature of the case, turn out finished practitioners; the young teacher as well as the young

doctor needs practical experience under competent supervision. Every school system has the responsibility not only of employing a certain number of beginning teachers but of providing for their sympathetic guidance. The practice of some of the larger cities of refusing to employ teachers who have not had at least a year's experience is unfair to smaller communities, and it does not contribute to the well-being of the profession.

S. M. Stouffer, superintendent of schools of Wilmington, Delaware, has adopted a plan of training beginning teachers which should be of interest to superintendents and teachers throughout the country. Mr. Stouffer has supplied us with the following description of his plan.

During the past three or four years we have been attempting to meet this problem in Wilmington by organizing what is known as the "cadet-teacher plan." Briefly stated, this system provides a period of practical training for the prospective teacher between the time of graduation and appointment to a regular teaching position. It is a sort of internship, lasting at least one year, similar to that required in the medical profession, during which time the prospective teacher becomes an assistant to what we call a "master teacher."

The cadet teacher is paid a nominal salary and is a full-time employee of the board of education. Throughout the period of her cadetship she observes the master teacher and assists her in her work. Ample opportunity is offered her to familiarize herself with the methods of instruction, the routine of school management, the educational policy of the school system, the courses of study, the textbooks and other materials of instruction, the filling-out of records and reports, and to perform any other duties or engage in any other activities that will better fit her for a regular appointment. As time goes on, she is permitted to do some teaching under the careful guidance and direction of the master teacher. An attempt is made to build up the most friendly and sympathetic relations possible between the cadet and the master teacher. The cadet teacher is also the chief object of concern on the part of the principal and the supervisor.

In addition to this direct help, there should be arranged a series of group conferences to be conducted by someone in the school system who understands and sympathizes with the problems of the beginning teacher. Problems to be discussed in these conferences should be suggested largely by the cadet teachers themselves—problems which grow out of their classroom experiences—although the sponsor should not hesitate to suggest other problems for consideration in case it seems wise and necessary to do so. Specialists from the various departments of the school system or from outside the system should be called in to assist in the discussions. When necessary, professional reading in relation to the problems under consideration should constitute a part of the training program.

Thus, through observation of the master teacher, through participation in the solution of actual classroom problems, through periodic conferences and check-ups, and through actual teaching experience under the sympathetic and intelligent guidance of the master teacher, the cadet teacher will be likely to develop proper habits of classroom procedure and acquire a feeling of confidence and assurance that will ultimately enable her to stand on her own feet and qualify for a regular appointment. If after a fair trial she fails to demonstrate that she possesses the qualities necessary for a successful teacher, she should be allowed to advance no further or should be dropped from the service.

One important feature of the Wilmington plan is that much of the substitute teaching is done by cadet teachers. This feature of the plan results in more efficient teaching and enables the Board of Education to finance the plan at no additional cost.

According to the Wilmington plan, a cadet teacher receives 50 per cent of the initial minimum salary paid to regular teachers. If she substitutes approximately 50 per cent of the time, this is equivalent to paying her the regular substitute rate only for the time during which she is actually substituting. In actual practice, of course, no distinction is made in her salary between the time she is substituting and the time she is observing and assisting the master teacher. Payments are uniform each month regardless of the amount of substituting up to thirty days. If she remains for more than thirty days in the same position, she is paid the full rate for a teacher of her training and experience. Assuming that the cadet teacher substitutes one half her time and observes the other half, it is obvious that the cadet plan costs no more than the traditional substitute system.

Superintendent Stouffer makes the following comment in general evaluation of the plan.

Finally, we look upon the cadet plan, as it has been developed in Wilmington during the past three years, merely as one feature of our teacher-training program. It does not aim to provide for a program of teacher training after the teacher has been appointed to a regular position. Its main purposes are to make substitute teaching more effective and to bridge the gap between the classroom and the teacher-training institution. All our people are agreed that it has proved effective and that, if some such plan is not employed, this gap will be bridged only with great difficulty on the part of the teacher and with serious loss to the child.

How to avoid overlapping experiences at different age levels.—Teachers who follow the informal type of curriculum program are frequently faced with the problem of how to avoid duplication of experience in different units of work. No doubt most teachers follow some method of recording the units that they have developed with their classes,

and there is little danger of duplication so long as pupils remain with the same teacher. Since units of work are not strictly graded, teachers who are faced with new pupils may, however, launch an activity which many of their pupils have already experienced. It is entirely possible that a child may go through the elementary-school period with a narrow childhood experience because of repetition and a lack of diversity of enterprises. Obviously teachers who employ activity units need to develop a system of record-keeping which will enable them to know as accurately as possible the experiences that their pupils have already had.

Elga M. Shearer, supervisor of elementary education (Grades IV–VI), in Long Beach, California, has supplied us with an account of a system of record-keeping which is being tried out in that city. There are two essential elements in the plan. The first step is to compile a list of the major experiences appropriate for elementary-school children. Each of these items receives a number which serves as a key to the record kept on each pupil's record card. Each pupil is provided with a record card on which is printed a series of simple numerals. At the close of a unit of work these individual record cards are placed in the hands of the pupils, who, under the direction of the teacher, check off those numerals representing the major activities embodied in the unit just completed. When a teacher is faced with a new group of pupils, the individual record cards are again placed in the hands of the pupils, and the teacher, by reading off the key numbers, can ascertain the activities in which the pupils have already engaged.

The case-conference method in character education.—Robert W. Peabody, principal of the Laurel Hill Avenue Platoon School, Providence, Rhode Island, has introduced a program of character education which is centered in the case-conference method. The program is based on the belief that boys and girls can be led to acquire correct ways of social behavior by giving them an opportunity to think through problems "in terms of specific instances of human experience." A group of seventy-five cases, or problem situations, has been assembled, each case or problem representing a practical, everyday situation. A questionnaire was filled out by fifteen hundred pupils in

Grades IV, V, and VI in order that the grade placement of the problems and the extent to which they represent real stumbling blocks of childhood might be determined. The problems are presented to a number of children, and a group solution is sought.

Activities for pre-reading groups.—It is coming to be rather commonly recognized that many children finish a year in the kindergarten without having attained the maturity required to do the kind of work usually scheduled in Grade I. Not so many years ago it was common practice to have these children undertake the work of Grade I and to fail the pupils who were unable to make satisfactory progress. Today, administrators and teachers are trying to work out a flexible program which will meet the needs of these children and which will avoid the frustration incident to failure and repetition.

E. E. Chiles, principal of the Harrison School, St. Louis, Missouri, has worked out a plan whereby pupils unable to do the regular work of Grade I are cared for in "pre-reading units." The program carried on in these units is in the nature of advanced kindergarten or preprimary work; it stresses the following attainments on the part of the pupils: a better understanding of the world about them; reasonable facility in the use of ideas in conversation and in simple reasoning; a command of English sufficient to speak with ease and freedom; a relatively wide speaking vocabulary; accurate enunciation and pronunciation; desire to read; ability to keep in mind a sequence of events; power of visual discrimination; and the acquisition of a vocabulary which will be most helpful when the children are ready to read books. The plan also calls for a clearly thought out analysis of the specific activities which will contribute to the attainment of the desired ends.

Improving reading through a reorganization of the instructional program.—From Edmund M. Forsythe, principal of the Lincoln School, Port Chester, New York, we have received a report of a plan of grouping pupils which has as its purpose the improvement of reading instruction. Through the administration of reading tests and teachers' estimates, it was discovered that pupils in Grade III B to Grade V A, inclusive, fell roughly into six ability groups. Pupils in each of these groups were assigned to teachers on the basis of their interests

and aptitudes in the teaching of reading. The procedure followed thereafter is described by Mr. Forsythe as follows:

> The reading groups met twice a day for a half-hour reading period, and all were taught at the same time. By this method of grouping, each child went to the particular room where the skills and the reading experiences that he needed were being emphasized. The teacher adapted her teaching to the children's level of reading ability and to their particular reading needs. Under the old plan these children had received only a half-hour of reading instruction a day. Under the new plan they enjoyed a full hour of intensive instruction. Again, under the old plan each teacher spent a half-hour each with the three different groups in her grade, thereby giving an hour and a half to reading in her room each day. By devoting one hour to reading in her room under the new plan we saved a half-hour daily while at the same time each child received double the instruction that he received before.

The pupils were classified into six groups as follows: The first was composed of the best readers from Grades III B, III A, and IV B. Children of average reading ability from the same grades composed a second group. A third group was made up of twenty-three children from the same grades who had not learned to read. Pupils of above-average reading ability from Grades IV A, V B, and V A composed the fourth group. A fifth group of low-average ability was made up of children from the same grades. The sixth group was composed of pupils of average ability drawn from Grades IV A, V B, and V A. An expert in reading instruction, Dr. Anna Cordts, who had general supervision of the program, worked out with each teacher the particular program of instruction for her group. Once a week Dr. Cordts worked with the teachers in the classroom. She demonstrated procedures with the children and, upon a teacher's invitation, observed her teaching and made suggestions for further improvement. At the close of the day Dr. Cordts met the teachers in a class, discussed their problems, their efforts and successes, and exchanged ideas with them.

Mr. Forsythe has been so impressed with the results of the plan that he is extending it in the autumn of 1937 to all the grades from I A to VII B. In evaluating the plan, he says in part:

> The most important job of an administrator is to improve the instruction in his school. This we are trying to do without any added expense to the school, without additional equipment, without any change in the teaching personnel, or any addition to the teaching staff. We are doing it through our practical set-

up for in-service teacher training directed by Dr. Cordts within the school itself and through our plan of organization, which provides longer periods of more specialized and intensive instruction in reading (thus enabling the teacher to become skilled in the various techniques and experiences in reading, one at a time, rather than overwhelming her by all the problems, intricacies, and frustrations that are sure to beset her when she tries, at once, to improve all the skills, abilities, attitudes, learnings, and experiences that are bound up in reading) and which makes it possible for each teacher to concentrate for an entire semester on one particular type of reading instruction at one general level of pupil ability. . . . .

I would advise every principal who wants to improve the reading instruction in his school to organize the groups in such a way that the teacher will be able to concentrate on one type of reading skill and experience until she is qualified to teach it. Reading is too complicated an experience for any but the expert to handle all its varied phases equally well.

Correcting an Error

We are in receipt of the following communication from Professor John A. Hockett, of the University of California.

I regret very much to send you word that in spite of a great deal of care one error appeared in the article by Mr. Neeley and myself entitled "The Vocabularies of Twenty-eight First Readers," published in the *Elementary School Journal*, January, 1937. On page 348, in Table I, Reader 7, *Children's Own*, should have been given a total number of words of 9,335 instead of 5,451, which appears in the first column. This change in amount of material would make a significant change in the average repetition given in the third column. This should have been 14.3 instead of 8.3. The statement in the last paragraph on page 347 that the range in average repetition is from 8.3 in *The Children's Own Readers* to 32.4 in *The Children's Bookshelf* is also erroneous. I hope, in justice to Ginn and Company, that you will make a correction in the *Journal*.

Materials and Services for Social Education

The National Forum, a nonpartisan movement for social education, with headquarters at 820 East Fifty-sixth Street, Chicago, Illinois, has recently issued a multigraphed volume entitled "Social Problems Visualized." The general purpose of the publication is indicated by the following quotation from the Introduction.

These charts present in simple and graphic form the more important facts, viewpoints, and problems of our social life. With the aid of picture and color they give the findings of scholars and of reliable institutions of research.

Following the usual policy of public forums the pictorial and discussion materials present, in some instances, partisan or contrasting points of view. These

are, of course, not to be interpreted as being the points of view of the editors themselves. The National Forum does not itself sponsor any particular social philosophy or partisan position. Its purpose is primarily to bring important facts and opinions to the attention of the people, and to clarify thinking with regard to the more significant social issues. It is earnestly hoped that all who use these materials will challenge and test every conclusion, and decide for themselves as to its validity.

Space is devoted to the consideration of a great many social, economic, and political problems of current interest. Statistical data are presented graphically and pictorially. At the end of the treatment of each problem, questions are suggested for discussion and a rather extended bibliography is introduced.

The Reorganization of Local School Administration in Pennsylvania

It is patent that the consequences of technological change have rendered hopelessly inadequate the mechanism of local school administration in many American states. Vested interests, the force of tradition, indifference, and inertia make reorganization along approved lines difficult, but each year records significant advances toward the establishment of more effective types of administrative control. At its last session the legislature of Pennsylvania enacted a statute which should materially improve the quality of local school administration in that state. The following analysis of the act is quoted from a recent issue of *Public Education*, a monthly bulletin published by the State Department of Public Instruction.

With the signature of Governor George H. Earle, the Ruth-Brownfield Education Bill providing for county boards and merging of small school districts becomes a law. The main purpose of this education measure . . . . is to provide procedures whereby small local districts, with the advice and assistance of county boards of school directors, shall be able to offer the pupils of their schools an educational program equivalent to that of larger districts. The measure marks a gradual and consistent development that will lead to numerous improvements of educational opportunities in rural areas.

The crux of the new law centers around the present county executive committee which is chosen annually by the school directors in districts under the supervision of county superintendents. According to the provisions of the law, this county executive committee, by having additional appropriate powers conferred on it, will become a county board of school directors. The county board of school directors, under the provisions of the law, will be charged with the pow-

er and duty to inspect budgets, approve transportation routes and contracts, recommend school sites and buildings, establish a uniform system of accounting under the county superintendent, supervise the enforcement of the attendance law, and make such studies and reports as may be suggested by the State Council of Education.

While the law provides for merging in 1938 of the thirty-four school districts in the Commonwealth which employ no teachers at present, yet the law is such as to achieve this purpose without disturbing the tenure of the present members of school boards in these districts. The law also provides a plan for additional merging in 1941 of districts in which the number of teachers is ten or less, and where the electors have approved the merger by public election. This is likewise accomplished without the necessity of removing from office any school director in service.

Another major provision of the Ruth-Brownfield Law relates to the office of county superintendent, who becomes the executive officer of the county board of school directors and ex officio member of all committees of the board. In this capacity, the county superintendent attends all meetings of the board and participates in all the discussions and debates but is not privileged to vote. He also signs the annual budget and furnishes such reports as may be required by the county board of school directors, or the superintendent of public instruction.

Many features of the new law promise widespread advantages to Pennsylvania's educational program. It will save children from educational disadvantages suffered at the hands of a bankrupt, or an indifferent school district. It tends to decentralize many powers, now centered in the Department of Public Instruction, to county officials, who are closer to the local communities and more likely to understand actual local needs and conditions. The county board of school directors, as provided in the law, serves as a relay agent through which many direct services are rendered to the local districts.

The movement towards consolidation, the popularity of which is evident from nearly nine hundred voluntary mergers that have taken place in Pennsylvania during the past decade or more, will be stimulated and encouraged by the provisions of this law. It also brings Pennsylvania more nearly in line with the nationwide movement to improve educational service through the development of larger attendance areas. Many states have already gone far beyond the proposals of this law.

The New State Board of Education in Georgia

A bill recently passed by the state legislature of Georgia provides for the abolition of the old state board of education and for the establishment of a new board. Under the terms of the act the new board will consist of eleven members appointed by the governor with the advice and consent of the senate. The state superintendent of schools is made the executive secretary of the board. In conformity

with recent trends in state school administration, the statute confers rather broad powers on the board. The following paragraphs quoted from the bill indicate something of the extent of the board's powers.

The State Board of Education shall provide rules and regulations for the supervision of all public schools of this state; they shall provide a course of study for all common and high schools receiving state aid, and may in their discretion approve additional courses of study set up by the local units of administration; provide for curriculum revisions and for the classification and certification of teachers. They shall make such rules and regulations as may be necessary for the operation of the common schools and for the administration of the common school fund. They shall prepare and submit to the governor and General Assembly of the State of Georgia an estimate of the funds necessary for the operation of the state public school system. They shall have general supervision of the State Department of Education, and shall employ and dismiss, upon the recommendation of the state superintendent of schools, such clerical employees, supervisors, administrators, and other employees, as may be necessary for the efficient operation of the common school system. They shall set aside the necessary funds for the maintenance of the office of the State Department of Education and the state superintendent of schools, the amount and sufficiency of said funds to be in the discretion of the State Board of Education, said funds to be disbursed by the state superintendent of schools in the payment of salaries and travel expense of employees; for printing, communication, equipment, repairs, and other expenses incidental to the operation of the State Department of Education. . . . .

The State Board of Education shall have appellate jurisdiction in all school matters which may be appealed from any county or city board of education, and its decisions in all such matters shall be final and conclusive. Appeals to the board must be made in writing through the county superintendent of schools, or the secretary of the Official Board of Independent Systems, and must distinctly set forth the questions of law, as well as the facts in the case. The board shall provide by regulation for notice to the opposite party and for hearing on the appeal.

The State Board of Education shall prescribe, by regulation, standard requirements for universities, colleges, normal or professional schools, conferring degrees or issuing diplomas in this state, and no charter granting the right to confer such degrees or diplomas shall be granted or issued until the applicants therefor have obtained from the State Board of Education a certificate showing that such requirements of the board have been met.

Implications for Curriculum Development of the Range in Individual Differences

Ethel L. Cornell, research assistant of the State Department of Education of New York, has recently completed an extensive study

of the achievement and intelligence of some five thousand children from widely differing communities throughout the state. Some of the implications of the study for curriculum development and for the grouping of pupils are summarized briefly in the following statement quoted from the "Report of Proceedings of the Third Annual Conference of Supervisors and Directors of Instruction in Elementary Schools." The conference was held in Albany, New York, under the auspices of the State Education Department.

A study of the range of variability of children (Ethel L. Cornell, *The Variability of Children of Different Ages and Its Relation to School Classification and Grouping*. Educational Research Studies, 1937, No. 1. University of the State of New York Bulletin No. 1101. Albany, New York: University of the State of New York, 1936) emphasized certain facts about the range of individual differences in achievement in standardized educational tests of children of the same age, which raise several far-reaching questions concerning present school practices. These facts, very briefly, are as follows:

1. The extent of "normal" variation (excluding the highest and lowest 2 per cent of each age group, for whom it may be assumed that specialized provisions for exceptional children are needed) is wider than can be provided for by the present grade organization. At the age of ten years, the "normal" range in educational age is more than five school years and at fourteen years is about seven and a half school years. In practice, the grade placement of ten-year-old children placed them within one-half year of the grade level shown by the test in only 53.7 per cent of the cases.

2. The factors conditioning achievement must be very complex. Achievement does not depend alone on level of mental ability: some ten-year-olds with a mental age of nine had as high achievement as some with a mental age of thirteen. Nor does it depend entirely on grade placement: the range of achievement on tests was about the same for ten-year-olds in the fourth grade, in the fifth grade, or in the sixth grade. Some ten-year-olds in the fourth grade had achievement above seventh grade, and some in the sixth grade had achievement below fifth. Nor does it depend entirely on a combination of ability and grade placement. Children of the same chronological age, the same mental age, and the same grade differ by as much as four or five school years in their tested achievement level.

3. There is some evidence that achievement is not as good at either extreme of the curve as ability warrants. The best and poorest 10 per cent in mental age appear to reach a higher level than the best and poorest 10 per cent in achievement.

4. The range of achievement in specific tests is greater than the range in composite achievement. In several tests of the Stanford Achievement battery

there are ten-year-olds who fail completely, and ten-year-olds who excel the norm for the tenth grade.

5. Certain differences in levels reached in different school subjects suggest that some differences may be due to instruction. The poorest 10 per cent of ten-year-olds in arithmetic computation are about one semester higher than the poorest 10 per cent in reading, but the best 10 per cent in reading are about three semesters higher than the best in arithmetic.

6. There is some evidence that the gains which may be expected from year to year differ at different parts of the range. The progress rate of the lowest quarter becomes very much less than the average at ages above ten while the best 10 per cent tend to gain at a somewhat accelerating rate.

These facts have many implications, among which some of the more important ones seem to be:

1. That we need to think through a different fundamental organization than that of grades for purposes of classifying or grouping children.

2. That our objectives need to be expressed in other terms than objectives for a so-called "grade."

3. That there is considerable question as to what extent the content of learning can or should be the same for pupils of such diverse attainments.

4. That we need more information about the extent of the range of pupils in fields of social learning and emotional maturity before we can determine whether the needs of pupils in these respects vary as much as they do in intellectual attainment.

Who's Who in This Issue

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THE STUDY OF DISABILITIES IN READING

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This article describes the methods of investigating reading difficulties used in the Orthogenic School of the University of Chicago. This school, which is administered by the Department of Education with the co-operation of the University Clinics, serves as a laboratory for the study of retardation or deficiency in learning or of maladjustment in behavior or personality. The purpose of this study is the analysis of the causes or conditions of these defects and the discovery or the evaluation of methods of treatment.

Among the children who are being studied and treated, a number manifest serious deficiency in the ability to read. This difficulty is commonly associated with disturbances of personality or behavior, since inability to read causes failure in school and results in conflicts with parents and teachers and in the development of anxieties or fears. The child is usually referred for study because of the disturbances of conduct or personality, but the difficulty in reading is, in many cases, the underlying cause and the point of attack. The following two cases illustrate the connection between behavior and difficulty in reading and the general improvement which results from clearing up the trouble with reading.

A boy now thirteen years of age was referred to the Orthogenic School at the age of ten. He had been unable to learn to read more than ten words. He was negativistic and had frequent temper tantrums. He tore up books when they were presented to him and told the teacher that many other persons had tried to teach him to read but that all had failed. For several months reading was approached indirectly, and he learned to recognize a limited vocabulary by sight before he was again presented with a book. Many stories which he composed were typewritten and bound in small booklets. The teacher spent a great deal of time with him in activities outside the

schoolroom. His interests were associated with reading, and his co-operation was elicited. As ability to read improved, the temper tantrums decreased and co-operation increased. Although the boy is not able to read as well as the average boy of his age, he has learned to accept his problem and is considered to be well adjusted.

The school report of a fourteen-year-old girl who was retarded in reading indicated that, instead of doing the assigned tasks, she would sit and daydream or complain that she could not do her work even though she had not attempted it. The parent said that this girl often refused to get up in the morning and dressed so slowly that she was always late for school. She made every effort to avoid the school, where undue pressure was exerted upon her to do work which was too difficult, and she frequently was truant. When the mother discovered the truancy, the child would have a series of temper tantrums and the mother was unable to manage her. When the girl came to the Orthogenic School, the remedial work was begun at her level of achievement. Frequent encouragement and reassurance were necessary, but the behavior problem was never so difficult as long as she was not urged to do work that she did not understand.

DISCOVERY AND DIAGNOSIS OF READING DEFICIENCY

Testing reading.—When the child is referred to the Orthogenic School, the fact that he is a poor reader may or may not be mentioned. If it is, a series of diagnostic tests is immediately applied to discover the precise nature of the difficulty. If it is not, the existence of the difficulty will appear from the results of the routine tests which are given to all children upon entrance. When a reading difficulty is discovered by these tests, detailed diagnosis is undertaken.

The child who has special difficulty in reading exhibits irregularity in his performance in the various school subjects. This irregularity is due to the fact that some subjects depend more largely on reading than do others. A general achievement test, which includes tests in all the major subjects, is therefore given to measure the child's general educational performance and to compare his performance in the various school subjects.

The child whose chief difficulty is inability to read usually receives scores in arithmetic computation which are higher than his scores in

reading and spelling. There is frequently a discrepancy of two to four grades in the levels of achievement in arithmetic and reading. Since reading ability is necessary for good scores in all the school subjects except arithmetic, the scores in those subjects are usually low. Any of several standardized survey tests may be used, but the New Stanford Achievement Test or the Metropolitan Achievement Tests are most frequently given in the Orthogenic School. One of the tests used for further analysis of the reading process is the Gray Standardized Oral Reading Paragraphs. On this test the examiner can measure speed of oral reading and the numbers and the kinds of errors made and can observe such aspects of reading as expression, word-grouping, and attack on new words.

Since some children can pronounce words while failing to get meaning from them, it is desirable to sample different types of understanding of reading material. The Gates Silent Reading Test is used for this purpose. This test measures four types of reading ability: appreciation of the general significance of a passage, ability to predict the outcome of given events, ability to understand precise directions, and ability to note details. These tests require the child to read as many paragraphs as possible in a uniform length of time and to answer questions on the material read. Thus, the examiner can measure speed and comprehension of silent reading of specific types and can compute the percentage of accuracy. Frequently a child guesses at answers without really understanding what he has read, and the percentage of accuracy enables the examiner to detect this habit.

The tests described indicate something of the child's general ability to read. If he does poorly in the school subjects requiring reading and does poorly in a reading test, there is evidently a reading deficiency. The nature of this deficiency, however, remains to be determined. For example, a child may be confused between right and left—a difficulty which leads him to confuse certain letters. Failure to distinguish clearly the sounds of words may cause a failure in the accurate association between sounds and letters. For testing these matters a diagnostic test is desirable. The Monroe Diagnostic Reading Examination is composed of several such tests. This examination measures knowledge of the alphabet, especially letters

which are easily confused, such as *b*, *d*, *p*, and *q*. It gives the child an opportunity to exhibit mirror-reading and mirror-writing. Hearing of sounds and ability to blend sounds into a whole word are tested as a part of this analysis. The Monroe test includes the Iota Word Test and the Word Discrimination Test, which give additional information of a diagnostic nature. One valuable feature of this test is the analysis of errors, which permits the examiner to record the number and the types of errors made. This analysis indicates the point of attack for remedial work. For instance, an excessive number of vowel and consonant errors, as compared with the standards, indicates the need of some phonic training. The Monroe examination also attempts to bring together the results of many tests, and a reading average is obtained on the basis of reading tests of five types. The reading index computed on the basis of the reading average is comparable regardless of age and grade placement, and gain in reading index accompanies improvement in reading ability.

If the child has not progressed far enough to be able to read and is therefore unable to take any of the reading tests, a reading-readiness test is administered. Such a test is designed to measure language development, motor control, visual ability, and other factors which will need special development to assure learning in the field of reading.

The inability to read fluently is often reflected in certain habits which can be noted by watching the child as he reads. Some of these habits are: moving the lips when reading silently, tilting the head in an unusual fashion, losing the place on the page, pointing with the index finger, and skipping pages.

CAUSES OF READING DIFFICULTIES

Intellectual retardation.—As has already been implied, deficiency in reading may be a somewhat specialized defect. On the other hand, the ability to read varies with the child's general intellectual ability. It is important, therefore, to know whether a child's reading deficiency is due to the general level of his intelligence or to some special cause. A child with specialized defects will respond more quickly to treatment than a child with low general intelligence. A general in-

telligence test is therefore administered to facilitate the interpretation and the prognosis of each case.

Group intelligence tests are not entirely satisfactory for this purpose because understanding the directions and performing the required tasks depend on the ability to read. Since the children who have special reading handicaps are unable to answer the questions, they receive low scores and are considered unintelligent and consequently uneducable. In view of the ambiguity in the interpretation of these tests, only individual tests should be employed.

The Stanford Revision of the Binet-Simon Intelligence Scale is given to each child studied. Reading requirements are minimum for this test. If a child manifests serious difficulty with reading, the test may be rescored by the Durrell[1] method, which removes tests that would penalize the child for inability to read. A comparison of the two scores will give the examiner an opportunity to interpret the intellectual handicap caused by inability to read satisfactorily. The Stanford-Binet test also measures vocabulary development, auditory span, association of words, orientation, and ability to reproduce visual patterns.

Since the Stanford-Binet test requires a great deal of verbal ability, it is usually supplemented by a nonverbal, or performance, test. The Arthur Performance Scale is composed of eight tests, each measuring a different manifestation of performance ability. In addition to the score on the composite test, the examiner is able to observe such traits as form perception, speed and accuracy of movements, co-ordination, judgment, persistence, and ability to follow directions.

The value of individual intelligence tests in the evaluation of reading difficulties is shown by the two following cases.

An eleven-year-old boy was referred to the school for study and possible treatment. He had failed to adjust in three schools and had been referred to a clinic. The mother reported that in the clinic he had been diagnosed as mentally deficient and had subsequently been placed in a special class in a public school. As he seemed to the mother to be the most intelligent child in the class, she wished further

[1] Harriet Monroe, *Children Who Cannot Read*, p. 69. Chicago: University of Chicago Press, 1932.

study of the case. With a chronological age of eleven years and eight months, the boy measured ten years and no months on the Stanford-Binet test and ten years and eight months on performance tests, but he had only second-grade reading ability. The diagnosis was dull-normal intelligence with a special deficiency in reading. Treatment over a period of nine months resulted in reading improvement until the ability to read became equal to the Stanford-Binet mental level. This result verified the conclusions reached when the boy was first examined.

Another boy, twelve years of age, was brought by the parents with the explanation that he had consistently failed in school and had not yet learned to read. They had been told by teachers that he was unintelligent and that he was probably the kind of child who would have to be put into an institution. Actually, with a chronological age of twelve years and seven months, his mental age on the Stanford-Binet test was ten years and ten months and his intelligence quotient 86. This case was diagnosed as dull normal with a severe reading handicap. A period of treatment verified the diagnosis in this case also.

Physical and emotional factors.—The literature concerning causes of failure in reading contains many theories regarding the importance of visual and auditory difficulties, preferred side of the body, emotional maladjustment, and physical condition of the child. An attempt is made to measure as many of these factors as possible and to discover their association with specific types of reading difficulty.

Visual factors.—The structural and functional condition of the eyes has recently received much attention in the study of difficulty in learning to read. Poor visual acuity is believed to be at least a contributing cause to difficulties in reading. An attempt is made to determine some of the functional problems of seeing which may be associated with reading failure.

Whether the child already reads or has not yet learned to read, it is important to discover any visual defects which might interfere with his reading. The Orthogenic School does not, of course, attempt to make a medical examination. It does, however, employ a number of tests which may reveal conditions requiring an examination by an ophthalmologist. When such conditions are found, the

child is referred for complete examination to a medical officer affiliated with the school. If glasses are prescribed, they are obtained; if exercises are needed, they are given. The tests used by the Orthogenic School are designed to detect major defects in the functioning of each eye individually or of the two eyes together. These defects may appear in the ability to recognize the distance of objects, the ability to move the two eyes in unison, the ability to fuse the images of the two eyes, or the ability to focus clearly with one or the other eye.

While the child is reading silently, photographic records are made of the movements of the eyes. The eye-movements frequently reflect defective or immature habits of reading. For instance, the eyes of a child in the primary grades fixate more frequently and for longer periods than those of an average adult. It is possible to count the number of fixations per line and to compute the average number of fixations for each hundred words. The examiner can also count the number of regressive movements and observe the accuracy of the return sweep of the eyes from the end of one line to the beginning of the next. The number of words read per minute can be calculated, and, by asking questions about the material, the examiner can also check the comprehension.

The eye-movement photographs frequently contain diagnostic information regarding the cause of unsatisfactory reading speed. For example, the tests given one child indicated that his comprehension was average for his age but that his reading rate was slow, although he had mastered the fundamental habits necessary for reading. The photographic film showed that, when his eyes returned from the end of one line to the beginning of the next, they were unable to focus properly and he had to look at the first word and the second, then return to these several times. About a fourth of his time was lost at the beginning of each line, but, after he started across the page, the fixations were uniform and regular. When this boy had learned to focus his eyes quickly on the first word of the line, the speed of reading became satisfactory.

Some children read with only one eye most of the time and suppress the other. The film has been found to be helpful in detecting this difficulty. One boy was turning his head so that the left

eye would not be on the page. The film indicated partial suppression, but it was not complete enough to eliminate frequent diplopia which interfered with his reading. Training to bring about the ability to focus on the same point with both eyes ended the tilt of the head and probably contributed to rhythmic movements of the eyes and progress in reading.

Occasionally a child can read well with one eye, not so well with the other, and has even more difficulty in using both eyes simultaneously. In the investigation of the functioning of the eyes in this respect, the Gray Standardized Oral Reading Check Tests are given. There are five of these tests, each composed of three paragraphs. Since the amount and the difficulty of material are standard, the scores are comparable. The child reads the first form with the preferred eye, the second with the non-preferred, the third with both eyes, the fourth with the non-preferred eye, and the last test with the preferred eye. The speed of reading and the number and types of errors are recorded for each eye and for the two eyes reading simultaneously. If the two eyes are not reading better than each separately, the ophthalmologist is consulted, and appropriate treatment is given. The following case illustrates this type of difficulty. The tests indicated that the boy's left eye read with accuracy of 83 per cent, the right eye 65 per cent, and both eyes 75 per cent. The left eye also read a little more quickly. Glasses were fitted to bring the visual acuity of the right eye up to normal, and training was given to the right eye alone in reading. Finally, binocular vision was developed through the use of prisms and devices for increasing rhythmic eye-movements.

When a child fixates the eyes many times on each line of print, there may be several causes. The reading material may be unfamiliar, or the child may be unable to see more than a few letters at one glance. As a test of this ability, a group of simple words has been so arranged that the first word presented has two letters, the second three letters, and so on until the largest number of letters exposed at one time is fifteen. The tachistoscope is used for the exposure since it permits the child to see a word for only a fraction of a second. Two or three exposures are made, and each eye is tested separately. If a child is unable to see the two letters at one time, it is frequently de-

sirable to direct training toward improving this function. Pictures or familiar words may be shown slowly but rhythmically, the speed of exposure being gradually increased until the child is capable of making quick responses to visual stimuli. The need for this training is illustrated by the case of a boy who was unable to recognize a two-letter word after three exposures. He was given training in recognizing pictures with the names printed below them and in quickly associating the names with the pictures. The speed of presentation and the number of letters in the names were increased until he was able to see four or five letters at one time and to reproduce them.

Auditory factors.—Some children are unable to hear sounds correctly or to discriminate between similar sounds, with the result that they form incorrect associations between the printed symbols and the sounds. Since the tests for this purpose are not considered adequate, some have been especially devised. One of these is composed of a list of paired words in which there is only a slight difference, at the beginning, in the middle, or at the end of the words, such as *witch* and *which*, *hide* and *hid*, *leak* and *leave*. A group of these words may be used for each ear separately and another for both ears together. It appears that inability to discriminate between sounds may be caused by lack of attention to the sounds, since training usually results in an increase of auditory discrimination. A case of this kind was that of a boy eleven years of age who had always had some difficulty with reading. On a list of twenty-five paired words his discriminative accuracy was only 31 per cent. A four-week period of training of fifteen minutes daily resulted in the ability to discover fine similarities and dissimilarities in words when they were presented to him orally.

Speech defects.—A speech defect is often present in children who have difficulty with auditory discrimination. Even when they are able to hear the sounds correctly, they cannot always reproduce them. Plans are being made for tests of hearing by such devices as the audiometer and for examination of the ear, nose, and throat of each child who has a speech or an auditory difficulty.

Cerebral dominance.—One of the theories of the cause of reading difficulties is that the child fails to establish the dominant function of one or the other hemispheres of the brain. Outwardly this failure

may show itself in the lack of definite hand preference; that is, the child does not use the left or the right hand in definite preference. Many complications are involved, according to some investigators, when the hand and the eye dominance are not of the same order, for example, right-handed preference with left-eyed preference. When a child shows these discrepant preferences, he is likely, according to these investigators, to become confused in following reading material. It is the belief of some workers in this field that left-handed children tend to reverse the sequence of words or to reverse letters in reading.

Many workers in the field of reading disability, therefore, are careful to examine the hand, ear, eye, and foot preferences of each child. Unfortunately, adequate and easily administered tests have not yet been developed for these measurements. In this article only a few of the tests used will be mentioned. The sight test is one of the more easily administered devices for the examination of eye preference. The child is given a square of cardboard with a one-inch circular opening in the center. He is told to hold the card at arm's length and to look through the opening at some object. The examiner can thus easily observe the eye preference of the child. This test should be repeated in order to determine the consistent preference of the child. Many other similar methods are used, such as requiring the child to use one eye in a particular activity, for example, in aiming at a target over a pencil.

Ear preference is also measured in several ways. As an example, the child is asked to pick up a watch from the table and to put it to his ear. He is also asked to answer a question asked him through a mailing tube and to turn his head in whichever way he prefers when listening to words spoken or whispered behind him.

Hand preference is determined by asking the child to perform unimanual activities, for example, to draw a line between two other lines spaced fairly close together, to keep time by tapping a marble on the table rhythmically, to snap his fingers, to stop a top, to bounce a ball, and to shoot a marble. The speed and the quality of writing with the preferred and the non-preferred hand are observed. The child is asked with which hand he performs certain habitual activi-

ties, and a history of the development of hand preference is obtained from the parents.

Foot preference is determined in ways similar to those used in discovering hand preference. The child may be requested to sit down and draw with one foot a simple design on the floor. He may also be asked to lift a ruler, to push over blocks, or to stop a spinning object with his foot.

A chart is made of the preference on these four tests. In some instances skill of performing the tasks is also measured. Electric-tapping boards are frequently used to measure skill of the hand and may also be adapted for use with the foot. There is frequently a difference in preference and dexterity as they are measured by these crude methods. More refinement in measuring methods and adequate norms are needed. Just how the results of the measurements are to be interpreted in relation to remedial-reading methods is not fully understood.

Lack of opportunity.—Some children who are unable to read seem to have lacked opportunity. Many of them have been absent frequently during their early school years and never seem to learn the fundamental habits of reading. These children usually make rapid progress when the fundamentals are taught from the beginning. A record of attendance and a history of previous school training are needed in the evaluation of the causes of reading difficulty

Use of wrong methods.—A method of teaching which is successful with the majority of children is sometimes not successful with a particular child. The appeal may have been almost entirely to the eyes, and in this case the phonic or the kinesthetic method may result in progress. It is important, therefore, to know which methods of teaching have been applied and the results of each type of training.

Emotional and behavior difficulties.—Most authors who discuss causes of reading difficulties mention emotional and behavior difficulties as associated, if not causative, factors. It has never been determined whether the emotional and behavior problems precede or follow the development of inability to make progress in school. The child who has difficulty with reading is usually discouraged and therefore on the defensive. He may develop antisocial behavior as a means of compensating for his inability to compete in the classroom.

Treatment of the children observed in the Orthogenic School fails to indicate the relation between the emotional problem and the reading problem. Observation indicates that both improve simultaneously. Emotional problems are studied by the psychiatrist, who diagnoses all new cases and makes recommendations concerning the most effective method of treatment. An example of a case referred chiefly because of emotional difficulties is that of an eighteen-year-old boy. He was referred by another school, and the complaints were stealing, lying, truancy, failure to do his work, and lack of dependability. When examined, the boy was found to have about average intelligence, but his reading scores were average for the beginning third-grade level. It was easy to understand why the boy had not been successful in school and why, as a Sophomore in high school, he was failing. He was trying to compensate for his failure by stealing things to give to the boys or by stealing a car to win their approval. Treatment resulted in an increase in the boy's ability to read and a decrease in undesirable behavior. Later he was able to adjust educationally and socially in the high school.

Attitude of parents.—Closely associated with the behavior of the child is the attitude of the parents and their method of handling the child. A social worker gains the confidence of the parents and attempts to learn of any factors which may have influenced the child's behavior. In one interesting case a very bright boy of six years wrote his numbers and letters backward. He was left-handed, and the parents confessed that they had discussed the possibility of his reversing numbers and letters. The boy had received much attention because of his difficulty and liked it. A short period of training at the Orthogenic School resulted in correct directional approach, and the boy had no difficulty with reading.

Physical condition.—The physical condition of each child is thoroughly investigated. Some children with reading difficulty have hampering physical defects which need treatment in order that the child may do his best work. A neurological examination is also made and in some cases is of special importance. In one case, for example, a boy had had an accident resulting in several fractures of the skull. After the injury he was unable to read. Neurological examinations gave some evidence of physical disturbance to the brain. The boy

was taught to read again in the same manner that a normal child learns except that the process was much more rapid. He was able to return to high school after remedial-reading treatment had been completed.

GENERAL METHODS OF TREATMENT

Treatment.—At the Orthogenic School children with reading difficulties are treated both as resident and as clinic cases. The former are more numerous, and residence is probably more effective. Clinical treatment is more applicable to cases where the retardation is not too great to allow the child to remain in his regular grade or where only specialized work is required. Children who are tutored elsewhere are sometimes sent to the school for treatment which requires special equipment.

Children in this school are taught in groups small enough to provide individual attention for each child and to enable each child to work at his own speed. The full diagnostic record and recommendations are given to the teacher before the child enters her room. She is then able to begin treatment at the level of the child's achievement in each school subject.

If individual work is required, the child leaves the group for this work. For instance, some children receive speech treatment, while others require work with an instrument to promote fluent reading or with prisms to exercise the muscles of the eye. If a special difficulty is encountered, it is often wise to give intensive individual training to the child outside the group. In subjects other than reading, these children may be grouped and receive stimulation from class work. They are also permitted to join the University Laboratory School gymnasium class into which they best fit socially. Other outside activities, such as Y.M.C.A. and scout activities, are encouraged.

The psychiatrist interviews the child from time to time, if desirable, and helps him to solve his conflicts regarding failure. At the same time the social worker is helping the parents to understand the problems of the child and to handle him more wisely. In short, the whole program is aimed toward removing pressure from the child so that he may be free to change his attitudes toward reading and the school.

The attempt is first made to understand the child's reactions toward his difficulties and, at the same time, to discover his interests. For this purpose the teacher often takes the child alone or with a small group on a tour, to a circus, or to a suitable motion picture. An attempt is made at all times to gain the child's confidence and to build up his faith in the teacher.

Materials.—In the selection of materials the teacher keeps foremost in her mind the child's interests. When all suitable printed materials are exhausted, as often occurs, the teacher writes stories for the child and presents them to him in typewritten form. Often the teacher uses a book, translating the story into simpler language and pasting in illustrations and pictures. Sometimes inexpensive but well-illustrated books are purchased, and new stories are pasted over the printing in the book. Since children's interests vary widely, it may be necessary to make a whole set of these books for each child treated. Material for individual drill is prepared on the typewriter for use each day, and stories are written which are designed to place emphasis on certain words or on a certain type of error that the child is frequently making.

Records.—Records and charts of the child's progress are made by the child or with his help. Thus, he may see at all times that he is having a degree of success. Rewards for working quickly are sometimes given in the form of extra playtime or more outside activities. If, however, the child fails to do his work, he may be required to use his playtime to finish it. Artificial motivation is gradually reduced as the child begins to achieve success and pleasure in reading.

CONCLUSION

The diagnosis and the treatment of children who have severe reading difficulties are in the experimental stage. Each case must be carefully examined, and treatment must be planned on the basis of the findings. Data on the manifestations of reading difficulties are being collected in an effort to link specific defects with special difficulties in reading in order that the remedial attack may be more direct. More data must be available before final conclusions can be reached.

THE EFFECT OF BILINGUALISM IN THE MEASUREMENT OF INTELLIGENCE

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INTRODUCTION

It is the general belief among teachers, particularly teachers in the Southwest, that the instruction of children from homes in which foreign languages are spoken is a serious educational problem. In this part of the United States many Mexican children enter the public schools with little, if any, acquaintance with any language other than Spanish. A child entering school knowing none of the English language presents a very different problem from that presented by the child who already understands and uses the language orally. The foreign-language-speaking child must learn both the oral and the written language of the school. Since this child really thinks in his own language, he has, for a rather extended period of time, much less ability to respond to the language of the school as an instrument of instruction.

Although this general condition is well established, little progress has been made in determining the rate at which this handicap diminishes, the point at which it becomes practically negligible, and the best methods of adjusting to it. The handicap of a Mexican child who knows no English at all can be accurately determined, but it is not so easy to estimate the amount of the difficulty that remains after three, four, five, or more years in the public schools of the United States. Upon this point opinion still seems divided.

Otis apparently believes that the language handicap of these foreign-language-speaking children is serious, particularly in the elementary grades, for he writes:

> The Otis Classification Test, like all so-called verbal tests, requires familiarity with the printed English language. Pupils from homes where a foreign language is spoken cannot be considered as properly tested by this test. This simply

means that some allowance must be made for such a pupil's score being lower than otherwise on account of what is generally termed "language difficulty." How much allowance to make is not known.[1]

Koch and Simmons, while somewhat guarded in their conclusions, appear to hold to a similar view. At least they found some evidence for the suggestion that the National Intelligence Test (a verbal test for Grades III–VIII) capitalizes the foreigners' disadvantages and, hence, is none too desirable as a tool for measuring the relative intelligence of races.[2] On the other hand, Garretson's study seems to support the hypothesis that the language handicap, so far as it is shown in test results, has almost disappeared by the time the child reaches the upper grades.[3]

Antonio Rodriguez, Jr.,[4] states that thought-getting and thought-expressing are dependent on language power and that Porto Rican children are unable to think in Spanish and English with the same facility and accuracy. He further states that the results on a test given in the mother-tongue are different from the results on a test given in the second language. When the second language is used as an instrument, what is tested is a partial amount of the child's ability to use the adopted tongue.

The writer, believing, as a result of his own observation and the observations of many instructors of Spanish-speaking children in the Southwest, that foreign-language children are handicapped because they think more accurately in their native language than they do in their adopted language, made a study to determine whether these children do as well on an intelligence test administered to them in the English language as they would do on a similar test administered in their native language.

[1] Arthur S. Otis, *Otis Classification Test, Manual of Directions*, p. 3. Yonkers-on-Hudson, New York: World Book Co., 1923.

[2] Helen Lois Koch and Rietta Simmons, *A Study of the Test-Performance of American, Mexican, and Negro Children.* Psychological Monographs, Vol. XXXV, No. 5. Princeton, New Jersey: Psychological Review Co., 1926.

[3] O. K. Garretson, "A Study of Causes of Retardation among Mexican Children in a Small Public School System in Arizona," *Journal of Educational Psychology*, XIX (January, 1928), 31–40.

[4] Antonio Rodriguez, Jr., "Are Bilingual Children Able To Think in Either Language with Equal Facility and Accuracy?" *Bulletin of the Department of Elementary School Principals*, X (January, 1931), 98–101.

PROCEDURE

It was necessary to use an intelligence test in which all directions were given orally and which required no writing of words. The test selected, because it is a nonverbal test, was the Otis Group Intelligence Scale, Primary Examination. This test is suited for use in the first three school grades. Through observation and through reading other studies of a similar nature, the writer believed that the best results could be obtained by testing in these grades. The testing program was carried on in public schools in Nogales, Arizona, during the school year 1933–34.

Form B was administered, with all the directions given orally in English, by the regular classroom teachers. Form A, the directions of which had been translated into Spanish by a high-school teacher of Spanish (who is himself Spanish), was administered by this teacher to all the three groups. The accuracy of the translation was checked by an official of the Mexican government. About ten days intervened between the administering of Form A and Form B. In order that accurate results might be obtained on the whole testing program, half of the whole group was tested first with Form A; the other half of the whole group was tested first with Form B.

The total number of children tested in this study was 295, but, because of the fact that some pupils were absent on one or the other testing dates or because of other disqualifying factors, the final number of cases that could be used for the study was 236, distributed as follows: Grade I, 89; Grade II, 89; Grade III, 58. All the children selected were of Mexican parentage, one or both parents being Mexican.

After all the tests had been scored and the intelligence quotients determined as a result of giving the directions for Form A in Spanish and giving the directions for Form B in English, many calculations were made to be used in evaluating the study. First, the difference between the intelligence quotient secured from the Spanish testing (Form A) and the intelligence quotient secured from the English testing (Form B) was found for each pupil in each of the three grades and for the composite of all grades. Second, the means and the standard deviations of the intelligence quotients were found for each of the three groups and for the composite group as a result of ad-

ministering the test in English and in Spanish. Third, the means and the standard deviations of the intelligence quotients for the boys in each of the three groups and for the girls in each of the three groups and their composites were computed for the English and the Spanish testings. Fourth, inasmuch as the test was composed of eight parts, each calculated to test a specific intellectual ability, the means and the standard deviations for each of the eight parts for both the English and the Spanish testings for each grade and for the composite group were calculated. It was believed that some indication might be brought out of the particular phase of the test which caused most of the difficulty so far as the language handicap is concerned. Fifth, the coefficients of correlation between the intelligence quotients obtained in the English testing and those obtained in the Spanish testing were computed in order that a comparison might be made with the coefficient of correlation between Form A and Form B as determined by the author of the test.

RESULTS

The first item to be considered is the difference in the intelligence quotients for each child in Spanish and English in each grade. Because of its length this table is omitted, but it may be noted that the maximum difference between the intelligence quotient in Spanish and the intelligence quotient in English was 44 points in favor of the Spanish testing.

Table 1 gives the means of the differences in the intelligence quotients in the three grades. The figures for this table were obtained (1) by constructing frequency tables of the differences in intelligence quotients for each child and averaging these differences for each grade and (2) by averaging the differences for all three grades combined into one frequency table. The maximum range of the difference in intelligence quotients (44 points) would indicate that there is a substantial handicap on account of inability to understand English. Among all the 236 cases tested in both languages, there were only nine pupils for whom there was no difference between the intelligence quotients obtained on the two tests.

Comparison of the means given in Table 2 shows that in Grade I the mean intelligence quotient secured from the Spanish testing is

greater by 7.87 points than the quotient secured from the English testing; that in Grade II the difference is 7.36 points in favor of the

TABLE 1

MEAN OF DIFFERENCES IN INTELLIGENCE QUOTIENTS SECURED FROM TESTS ADMINISTERED IN SPANISH AND IN ENGLISH TO 236 SPANISH-SPEAKING PUPILS IN GRADES I–III

Grade	Mean Difference in Favor of Spanish	Range
I	13.13	0–44
II	11.77	0–33
III	15.59	0–32
All grades	13.22	0–44

TABLE 2

MEANS, STANDARD DEVIATIONS, AND PROBABLE ERRORS OF INTELLIGENCE QUOTIENTS SECURED FROM TESTS ADMINISTERED IN SPANISH AND IN ENGLISH TO 236 SPANISH-SPEAKING PUPILS IN GRADES I–III

Test	Mean Intelligence Quotient	Standard Deviation	Probable Error
Grade I:			
Spanish testing	95.65	12.75	0.91
English testing	87.78	16.80	1.20
Grade II:			
Spanish testing	95.42	15.98	1.14
English testing	88.06	15.85	1.13
Grade III:			
Spanish testing	98.10	9.45	0.84
English testing	84.30	11.15	0.99
All grades:			
Spanish testing	96.15	13.40	0.59
English testing	86.87	15.70	0.69

Spanish testing; that in Grade III the difference is 13.80 points; and that for all three grades the difference in the mean intelligence quotients is 9.28 points in favor of the Spanish testing.

Haught[1] states, as a result of a study of Mexican children, that there is a sudden drop in intelligence quotients at about ten years of age. His conclusion might be borne out by the mean shown in Table 2 for Grade III in the English testing, but it is not borne out by the Spanish testing; for the mean intelligence quotient secured from the Spanish testing increased by about the same amount as the decrease in the mean on the English testing.

The results of comparing the mean scores of the boys with the mean scores of the girls led to the conclusion that there was little difference in the performance of the boys and girls on the test. The mean intelligence quotients for the boys on both the Spanish and the English testings were approximately one point higher than those for the girls, and this amount is not worth serious consideration.

The mean scores on the separate parts of the test, given in Table 3, show that there was no substantial variation in performance on any particular part. It would appear that the difficulty is a general language handicap rather than a specific difficulty.

The correlation of .61 ± .044 obtained as a result of comparing the Spanish testing with the English testing in Grade I is very low when consideration is given to the test publisher's correlation between Form A and Form B in English (.97). The coefficient of correlation between the Spanish and the English testings increased in Grade II to .81 ± .025 but decreased in Grade III to .71 ± .044. We should expect a gradual increase in the coefficient of correlation from Grade I to Grade III. The only explanation that can be made here for the discrepancy is that the number of cases tested in Grade III was only fifty-eight compared with eighty-nine cases in each of the other two grades. Table 1 shows that the mean difference in the intelligence quotients in Grade II also decreased but increased in Grade III. The explanation in the preceding sentence for the decrease in the coefficient of correlation in Grade III seems to be reflected also in an increase in mean difference between intelligence quotients in Grade III. For all three grades the correlation between the intelligence quotients secured on the English and the Spanish testings was .72 ± .021.

[1] B. F. Haught, "The Language Difficulty of Spanish-American Children," *Journal of Applied Psychology*, XV (February, 1931), 92–95.

TABLE 3

MEAN SCORES EARNED ON EACH PART OF OTIS GROUP INTELLIGENCE SCALE ADMINISTERED IN ENGLISH AND IN SPANISH TO 236 SPANISH-SPEAKING PUPILS IN GRADES I–III

Test and Grade	Mean Score		Standard Deviation	
	Spanish Testing	English Testing	Spanish Testing	English Testing
Test 1 (Following Directions—Maximum score, 16):				
Grade I	7.44	4.74	2.16	2.30
Grade II	9.03	6.72	2.58	2.47
Grade III	10.66	8.26	2.23	2.44
All grades	8.83	6.35	2.58	2.77
Test 2 (Association—Maximum score, 12):				
Grade I	9.69	7.46	3.25	4.03
Grade II	11.11	9.71	2.65	3.49
Grade III	12.07	10.34	1.22	3.07
All grades	10.81	8.59	2.81	3.96
Test 3 (Picture Completion—Maximum score, 12):				
Grade I	6.58	6.01	2.36	2.69
Grade II	8.67	8.89	2.14	2.11
Grade III	9.79	9.09	1.82	1.98
All grades	8.16	8.06	2.51	2.67
Test 4 (Maze—Maximum score, 10):				
Grade I	5.05	4.08	3.47	3.74
Grade II	6.80	4.42	3.60	3.37
Grade III	8.12	6.43	2.92	3.50
All grades	6.45	4.36	2.61	2.77
Test 5 (Picture Sequence—Maximum score, 7):				
Grade I	2.74	1.80	1.85	1.60
Grade II	3.89	3.16	2.00	1.88
Grade III	5.19	3.90	1.65	1.83
All grades	3.78	2.83	2.10	1.97
Test 6 (Similarities—Maximum score, 8):				
Grade I	3.01	1.43	2.81	1.82
Grade II	4.23	2.57	2.91	2.34
Grade III	7.84	4.03	1.80	2.43
All grades	4.41	2.50	3.03	2.40

TABLE 3—*Continued*

Test and Grade	Mean Score		Standard Deviation	
	Spanish Testing	English Testing	Spanish Testing	English Testing
Test 7 (Synonym-Antonym—Maximum score, 10):				
Grade I	4.39	3.39	2.48	2.51
Grade II	5.44	4.19	2.19	2.33
Grade III	6.36	4.19	2.49	2.51
All grades	5.34	3.92	2.89	2.48
Test 8 (Common Sense—Maximum score, 10):				
Grade I	4.72	2.07	2.71	2.21
Grade II	6.87	5.24	1.88	2.08
Grade III	7.83	2.81	1.84	2.33
All grades	6.30	4.21	2.56	2.52

GENERAL SUMMARY, CONCLUSIONS, AND IMPLICATIONS

The purpose of this study was to determine whether bilingualism has an appreciable effect on the ability of the children to think with equal accuracy and facility in either language. In other words, is an intelligence test administered in English a fair estimate of a child's intelligence quotient when that child thinks in a language other than English? Two forms of a nonverbal intelligence test, with directions for one form given in Spanish and for the other in English, were administered to the same groups.

The results of this study indicate that bilingual children work under a serious handicap, especially in their earlier years, in American schools. The mean difference in the intelligence quotients obtained as a result of testing in the child's native language and testing in English was 9.28 in favor of the Spanish translation—a finding which indicates that there is a difficulty worthy of consideration. Again, the mean of the differences between the intelligence quotients secured from the Spanish and the English testings for all grades was found to be 13.22 points, with a range of 44 points. At the very least, this difference indicates an extra obstacle in the learning process for a foreign-language-speaking child.

From a study of all the facts brought out in this problem of determining the correct intelligence quotients of foreign-language children, particularly in their earlier years in American schools, the question might properly be asked: Would it not be well to take account of this handicap if tests are given only in the English language? This matter of testing in two languages not only concerns children of Mexican parentage but probably applies in other parts of the country with equal force to children coming from homes in which any foreign languages are spoken. If an exhaustive study could be made in the Southwest, using thousands of cases for each of the lower grades, the mean of the differences in the intelligence quotients secured from Spanish and English testings would provide a corrective figure which could be added to each intelligence quotient obtained by testing a foreign-language-speaking child in the English language. A mean difference in intelligence quotients would have to be secured for each grade because this mean difference would be expected to decrease as the child progresses to a higher grade in school.

The mean of the differences between the intelligence quotients in Grade I, according to the results in Table 1, is 13.13. If this mean difference were added to the individual intelligence quotients obtained from the English testing in this grade, the resultant intelligence quotients would be too large in some cases; in others, too small. The same condition would result in Grades II and III. It is believed that the means of the differences found in this study cannot be applied as corrective figures because of the small number of cases used. Even though some formula cannot be worked out to give a proper corrective figure, it should be borne in mind that an intelligence test administered in the English language to foreign-language-speaking children is not a fair test of the intelligence of such children.

It is apparent that in the education of Spanish-speaking children there is a combination of practically all the factors which impair the value of test results. Undoubtedly the inferiority in ability to think accurately in the adopted language is not peculiar to Spanish-speaking children but is more or less common to all foreign-language-speaking children.

READING IN AN INTERMEDIATE-GRADE SCIENCE PROGRAM

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Even a superficial survey of science-teaching in the intermediate grades reveals the fact that teachers of science hold widely different views concerning the role which reading should play in an intermediate-grade science course. One extreme is represented by those teachers who make of a science course merely a series of reading exercises. In fact, in some schools in which science is taught, it is not programmed as a separate subject but is included under "Reading." The other extreme is represented by those teachers who have been led by Agassiz's famous dictum, "Take your text from the brooks, not from the booksellers,"[1] and later restatements of the same idea to consider reading a last resort in the teaching of science.

As is often the case, the middle ground between the two extremes is the safest. It is not necessary to place so much dependence on reading in a science course at the intermediate-grade level as in the courses in other content subjects at that level. No intermediate-grade unit in science should be wholly a "library" unit. The method of science is as important as are the facts of science, and every unit should provide firsthand experience with such tools of the scientist as experimentation and direct observation of materials and phenomena. However, reading does have an important role to play in the teaching of science, and every science teacher should understand exactly what that role is.

In order to be able to analyze the role of reading in an intermediate-grade science course, let us look first at the rather generally recognized major goals of such a course. Stated in their lowest terms, they are: (1) a fund of knowledge which will lead to a better understanding of the environment and will serve as a basis for the solution of problems of science as they arise; (2) a scientific attitude; (3) an

[1] Lane Cooper, *Louis Agassiz as a Teacher*, p. 66. Ithaca, New York: Comstock Publishing Co., 1917.

acquaintance with the scientific method of attacking problems and some degree of skill in scientific thinking; (4) an interest in science; and (5) an appreciation of the part which science plays in modern life.

The reading material helpful in reaching these goals may be divided into two classes: guide-test material and assimilative, or content, material. The purposes of the guide-test material are evident from the name; the purposes of the assimilative, or content, material need further consideration.

Reading material of the assimilative type is helpful in the representation of subject matter that has first been presented orally. To illustrate, an explanation of the regular recurrence of the phases of the moon, an easily observable phenomenon, is rather complicated. The teacher, let us suppose, has developed the explanation in an oral discussion with the help of charts and models. For some children the one presentation will suffice; for others repeated presentations will be necessary. Adequate reading material will re-present the explanation without subjecting the faster members of the group to the boredom inevitably attendant on repeated oral presentations.

Reading material furnishes a means by which children can check the conclusions that they have reached by class discussion. Each member of a class, let us say, has made a list of all the foods that we could have to eat if there were no green plants on the earth. The lists are compared and discussed, and the class reaches the conclusion that people could not live on the earth if there were no green plants because they would have no food except salt and water. To check this conclusion, the class is referred to reading material which contains such statements as the following: "What, then, would be left on your list? Water and a few other minerals, such as salt and lime! Of course, with nothing else to eat, we could not live. A world without plants would be a world without people!" Perhaps, as a further illustration, the class has just seen a piece of rubber dam "form a balloon" inside a bladder glass after a part of the air in the glass was exhausted. The class offers two hypotheses—one, that the rubber was pushed in; the other, that it was pulled in. The majority of the children, as is usually the case, favor the "pulled-in" explanation, but a few cling to the other view. Reading material is then provided which says in essence, "When the air is pumped from the

glass, the air above the rubber presses the rubber into the glass. The rubber is, then, *pushed* in, not pulled in."

Of course, in both cases the teacher might have done the checking orally. Checking by consulting some written authority is likely, however, to make a deeper impression, and it has the advantage of familiarizing the members of the class with the vocabulary of the unit in print. Moreover, the teacher who forms the habit of asking a class to check its conclusions by reading will not be guilty of a certain common violation of the rules of good science-teaching. Often a teacher, after the explanation of some phenomenon has been offered by one member of a group, asks, "How many agree?" If the whole class agrees, the agreement of the class is likely to be accepted as evidence that the explanation is right. Accepting the opinion of a class as evidence that a conclusion is correct results in poor training in scientific method regardless of whether the conclusion reached is right or wrong. A class must be made to understand that questions of science cannot be settled by a show of hands. Progress in science has characteristically been made by the lone scientist who did not agree with the common opinion.

It goes without saying that children should not be led to regard printed material as infallible. They should, on the other hand, realize that most of the material in science books has been written or at least checked by recognized authorities and for that reason has weight.

Through reading, children can broaden their experiences within the areas of science with which their class work is concerned. A class may work with electromagnets in the laboratory. Each child may make a magnet for himself. Electromagnets may be found at work in bells, buzzers, motors, and telegraph sets. Reading material can then describe for the class magnets at work removing bits of iron from the flour in a flour mill, lifting huge hot blocks of steel in a steel mill, helping magicians do some of their spectacular tricks, and breaking up great piles of metal junk with the help of skull crackers. Children can be given firsthand experience with air-pressure phenomena. Reading material can take them up seventy-two thousand feet, into the stratosphere, and tell them about conditions of air pressure there. It can take them, too, underground in a caisson and

show them air pressure holding back a river while a tunnel is being built. A class may examine a compass and carry on many simple experiments with it. Reading material can show how a compass acts at the North Magnetic Pole. Fossils can easily be examined by children in museums and in laboratories. Reading material can carry the children backward in time and reconstruct for them the conditions on the earth at the time when the fossil plants and animals were alive.

Reading material designed to broaden children's experiences must be the *chief* dependence in the attainment of one of the goals of science-teaching: an appreciation of the part which science is playing in the world today. From firsthand experience children can get no adequate picture of its importance.

Reading material designed to broaden children's experiences furnishes, as a basis for making generalizations and solving problems, data which cannot be provided by firsthand experience. One of the major flaws in the science-teaching of today is that children are often allowed—even urged—to generalize from insufficient data. To illustrate, a group, we will assume, is studying fishes. In the aquariums there are fishes of several kinds. Ways in which fishes are fitted for living in water are discussed. The children, from observation of the specimens at hand, are very likely to jump to the generalization that, as a means of adaptation to their environment, all fishes have fins. Clearly it is not sound science-teaching to allow the class to reach such a generalization from the observation of the necessarily limited number of fishes at hand. Pictures and reading material must be depended on to furnish the additional data needed as a basis for such a generalization. In the same way, reading material must be the chief dependence in the solution of such problems as, "Are the other planets of our solar system inhabited?"

Through stories of the work of famous scientists, reading has a distinct contribution to make toward acquainting children with the scientific method of attacking problems. Arguments have long been carried on as to whether practice in solving simple problems or the reading of accounts of how scientists have solved problems gives children the better idea of scientific method. There is no reason for depending on one approach to the exclusion of the other. Such stories

as those of Darwin's patient accumulation of evidence for nineteen years before he published his book about the origin of species, of Pasteur's careful investigations of the diseases first of silkworms and then of people, and of Maud Slye's work with generation after generation of dancing mice in her study of cancer cannot fail to contribute something to the understanding of true scientific method.

Stories of scientific achievement as well as discussions of unfounded beliefs help make clear to children what is meant by a scientific attitude. No one knows the extent to which an understanding of a scientific attitude is effective in the development of a scientific attitude. It is certainly an initial step.

Finally, reading is helpful in widening the range of children's interest in science. The field of science is so vast that it will probably never be possible to provide time enough in the intermediate grades for the handling of all the science units appropriate for children at that level. Children can, however, be encouraged to use some of their leisure time in following any lines of interest that they may have in science. The problem of the wise use of leisure time is coming to be a problem of major concern. The importance of reading materials which serve to suggest and direct the pursuit of worthwhile hobbies and leisure activities is, therefore, growing.

It is clear, then, that, in addition to the guide-test material needed for each unit covered, reading material of the following kinds should be provided if reading is to serve to the fullest extent its several purposes in the intermediate-grade science program: (1) accurate informational material for use in checking interpretations, solving problems, and arriving at generalizations; (2) stories of firsthand experiences with natural phenomena, of scientific exploration, and of the achievements of famous scientists; (3) accounts of the part science is playing in the world today—stories of modern applications of scientific principles; (4) suggestions and directions for leisure-time activities, such as the making of collections, the carrying-on of experiments, and the constructing of pieces of apparatus—activities which an intermediate-grade pupil will be able to undertake with a reasonable chance of success; (5) myths, presented as evidences of man's early striving to understand his environment, and discussions of superstitions which we should have outgrown.

Is all the needed reading material of the various types available? The answer is clearly "no." The inclusion in bibliographies accompanying outlines of science courses of books that are far too difficult in both vocabulary and sentence structure for most intermediate-grade pupils proves the point. There is a rather large amount of textbook material. Much of it is good. Within the limits of a textbook, however, there is not room for all the types of material that are needed. Moreover, space limitations make it necessary, as a rule, to crowd into a few pages even the information needed in connection with each unit. As a result, part of the intermediate-grade textbook material is dense. We need simple material which elaborates certain topics in the textbook. We need material like De Kruif's *Microbe Hunters* but written more simply. We need vivid stories of firsthand experiences with scientific phenomena—stories like John Muir's *Stickeen* and Griggs's account of his adventures in "the Valley of Ten Thousand Smokes" but again written more simply. We need attractive material that will encourage children to spend some of their leisure time on science. We need material that will show children the contrast between the superstition of the past and the science of today. We have some of all the various types of materials needed. We should have much more. The material should, moreover, be published in small blocks so that it will not look formidable to the child who is not a fluent reader. It should be written simply, but it should not be "written down." It should be attractively illustrated. Ideally, moreover, it should be inexpensive enough so that it can be made available for the use of intermediate-grade children in large quantities. Not until there is an abundance of such material can reading ever realize its full possibilities as a tool in the teaching of science at the intermediate-grade level.

LOCAL OPPORTUNITY AND KNOWLEDGE OF CURRENT EVENTS

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INTRODUCTION

In an earlier number of this journal the author reported a study[1] of the knowledge of current events based on the results of a semi-standardized multiple-choice test which had been given for two successive years (1934 and 1935) in Grades VI–XII, inclusive, in the South Portland public schools. The emphasis of that article was on (1) the relative standing of boys and girls and (2) the influence of the methods of presenting current events in the classroom.

The present study is based on the results of a similar test given in 1936 to nearly five thousand pupils in seven more or less widely separated school systems of varying sizes. Though this study will again consider briefly the relative standing of boys and girls in the tests, the aim here is to emphasize the relation of types of school and community opportunities to current-events knowledge. Are certain conditions especially favorable, and are certain other conditions especially unfavorable, for acquiring such knowledge?

If the assumption be granted that good citizenship implies an intelligent knowledge of what is going on in the world, it is a matter of serious concern should this study show that a considerable portion of our future citizens are deprived of such knowledge.

COMMUNITY BACKGROUNDS

The 1936 test was given, as stated, in schools located in seven communities. It is necessary to know something of these communities in order to understand the significance of the comparative test results. The cities and towns concerned are listed below in order of

[1] L. C. Day, "Boys and Girls and Current Events," *Elementary School Journal*, XXXVI (January, 1936), 354–61.

size. Item 1 in each instance describes the community, while Item 2 indicates the school group taking the test and the number of pupils in the group.

A. 1. A borough of New York City: a large metropolitan area with a varied commercial and industrial background and many cultural opportunities.
   2. All pupils in Grades VI, VII, and VIII of one public school: 700 pupils.

B. 1. Midwestern city near Chicago: population 46,000; industrial background.
   2. All pupils in Grades VI–XII, inclusive: 1,609 pupils.

C. 1. Small New England city (South Portland): population 14,000; largely residential but to some extent commercial.
   2. All pupils in Grades VI–XII, inclusive: 1,851 pupils.

D. 1. New England town: population 3,600; both industrial and agricultural interests. Also an adjoining purely rural town in same school union: population 850.
   2. All pupils in Grades VI, VII, and VIII in both towns and also Grades IX–XII, inclusive, in the larger town: 371 pupils. The larger town maintains two high schools in two separate villages; one of these schools enrols only 50 pupils.

E. 1. New England town: population 3,200; chiefly industrial.
   2. All pupils in Grades X, XI, and XII: 136 pupils. A single high school, serving not only the town itself but also one nearby rural community.

F. 1. Small New England town: population 1,300. Two adjoining smaller towns, together having a population of 1,025; almost wholly agricultural.
   2. All pupils in Grades VI–XII, inclusive: 233 pupils. These were in several rural schools of the traditional type.

G. 1. Small Midwestern township: population 800; partly agricultural, partly industrial.
   2. All pupils in Grades VI, VII, and VIII: 34 pupils. A consolidated village school.

It may be stated in summary that these communities range in size and type from metropolitan New York down to a small village of eight hundred inhabitants and that they are located in four states. The number of pupils tested in the schools range from 34 to 1,851, but the number was not necessarily in proportion to the size of the town or city concerned; the selection of schools and grades was determined simply by the location of, and facilities available to, the several superintendents and principals who volunteered to administer the tests. A total of 4,934 pupils took the tests; of these, 2,459 were boys and 2,475 were girls.

STANDINGS OF BOYS AND GIRLS

The boys led the girls in all seven school systems, as in the tests at South Portland reported in the earlier article. Of thirty-seven grade groups tested, the boys had a higher score in thirty-one and the girls in five, while in one group, Grade VI in Community D, only girls were enrolled. The general school standing of the boys was most imperiled in Community G, where the girls excelled in two of the three grades tested, but the boys were sufficiently high in the other

TABLE 1

COMPARISON OF MEANS OF MEDIAN GRADE SCORES OF BOYS AND GIRLS ON TEST OF CURRENT EVENTS

Grade	Number of Medians	Mean of Median Grade Scores*		
		Boys	Girls	Excess of Boys
VI	6	28.0	25.3	2.7
VII	6	30.8	26.1	4.7
VIII	6	31.0	30.3	0.7
IX	4	32.9	30.7	2.2
X	5	35.4	31.6	3.8
XI	5	35.6	33.2	2.4
XII	5	39.9	34.8	5.1
Mean	.....	.....	.....	3.1

* The highest possible score is 50.

grade to maintain a favorable average for the boys in the school system.

A condensed comparative summary of the entire group of boys and girls for all seven participating systems is presented in Table 1. This table was obtained by tabulating the grade medians for all groups tested and then finding the means of the several medians. The table shows that boys may be expected to have a somewhat superior knowledge of current events at every grade level. The excess of the boys' over the girls' scores ranges from 0.7 in Grade VIII to 5.1 in Grade XII, with a mean excess for all grades of 3.1. This mean excess may be compared with a three-year mean excess of 3.5 obtained at South Portland.

GRADE MEDIANS

A complete summary of the test results in the seven school systems where the tests were given is presented in Table 2. The table is arranged in accordance with the initial descriptive list, in which the largest city (A) is placed first and the smallest town (G) last. It becomes obvious, as one compares the grade medians that, in general, the larger the community in which a school is located, the better is the pupils' knowledge of current events. There are occa-

TABLE 2

MEDIAN GRADE SCORES MADE BY 4,934 PUPILS IN SEVEN COMMUNITIES ON TEST OF CURRENT EVENTS

Community	Number of Pupils Tested	Median Scores in Grade						
		VI	VII	VIII	IX	X	XI	XII
A	700	31.5	36.5	39.0	.....	.....	.....	.....
B	1,609	29.5	31.0	38.0	36.0	39.0	39.5	42.0
C	1,851	30.0	31.0	34.0	34.0	35.0	38.0	38.5
D	371	17.0	28.0	30.0	33.0	33.0	32.0	37.0
E	136	.....	.....	.....	.....	33.0	37.0	37.0
F	233	18.0	16.0	18.0	26.0	26.0	28.0	31.0
G	34	27.0	23.0	25.0	.....	.....	.....	.....
Mean of medians	.....	25.5	27.6	30.7	32.3	33.2	34.9	37.1
Range*	.....	13.5	20.5	21.0	10.0	13.0	11.5	11.0
South Portland three-year mean	.....	27.3	30.0	33.3	34.7	36.7	39.0	41.7

* The mean range for all grades is 14.4.

sional grade exceptions to this tendency, which the writer will not attempt to explain and which in any case may be of no particular significance. In instances where a whole school group departs from this tendency, however, there are local factors which may explain the exception. These exceptions will be discussed in a later section of this article.

The differences in the amount of current-events knowledge within the same grade in different school systems are given emphasis in the ranges of the scores. The greatest ranges occur in Grades VII and VIII, while the smallest is in Grade IX. The mean range for all grades is 14.4.

A mean of the several medians in each grade is presented to serve

as a kind of standard score for the grade. A further standard is afforded by the three-year mean obtained in South Portland.

MEDIAN SCORE TOTALS OF CERTAIN GRADE GROUPS

Table 3 presents a grouping and a totaling of the median scores which brings out more clearly the tendency for current-events knowledge to vary directly with the size of the community. The group totals are determined by the distribution of the test groups in the several participating school systems. Group X consists of Grades VI, VII, and VIII, which were tested in six of the seven systems;

TABLE 3

TOTAL OF MEDIAN SCORES ON TEST OF CURRENT EVENTS FOR CERTAIN GRADE GROUPS IN SEVEN COMMUNITIES

Community Background	Group X (Grades VI, VII, VIII)	Group Y (Grade IX)	Group Z (Grades X, XI, XII)
A (Large metropolitan; commercial, industrial)	107.0	.....	.....
B (Medium-sized city; industrial)	98.5	36.0	120.5
C (Small city; residential, commercial)	95.0	34.0	111.5
D (Small town; industrial, agricultural; two high schools)	75.0	33.0	102.0
E (Small town; chiefly industrial; single high school)	.....	.....	107.0
F (Small rural; agricultural; traditional-type schools)	52.0	26.0	85.0
G (Small rural; agricultural, industrial; consolidated school)	75.0	.....	.....

Group Y is concerned with Grade IX only, tested in four systems; and Group Z consists of Grades X, XI, and XII, which were tested in five systems. The respective grade medians for each system participating in each group have been added together (except in Group Y, representing only a single grade) in order to obtain a comprehensive comparative measure of the results.

In Group X the median totals decrease exactly in accordance with community size except in the smallest place, Community G. This community appears to be not only an exception to the rule but a case in which there is a good reason for an exception. Community F is a rural community still maintaining numerous one-room schools; Community G, though a somewhat smaller place, has a single con-

solidated school. One instance may prove little, but certainly in this one instance the consolidated school is shown to have a much better current-events record than that of a comparable group of one-room schools of the traditional type.

The descent of the scores parallels community size without exception in Group Y, Community B, the medium-sized city, having a ninth-grade median of 36.0 and Community F, the purely rural community, standing at 26.0.

In Group Z, as in Group X, the scores are on a descending scale with one exception. Community E, though smaller than Community D, scores 107.0 compared with the larger community's score of 102.0. Here again, there are special local factors possibly playing a part. Community D is a community which, small as it is, maintains two separate high schools, one enrolling less than fifty pupils. Community E, on the other hand, devotes its effort and expense to a single high school, receiving also some support from tuitions paid by an adjoining town. Community F has a small six-year high school which has suffered seriously during the depression and, in addition, has certain community background handicaps which will be discussed in the following section of this article.

HANDICAPS OF THE SMALL COMMUNITY

Every teacher co-operating in this study submitted a brief report indicating the type and the amount of current-events instruction given in his room. No attempt will be made here to evaluate methods and materials, but the evidence confirms, in general, the conclusion noted in the writer's earlier study that definite, systematic instruction is more vital than the type of material used. The great virtue of current-events periodicals in schools seems to be their tendency to cause teachers to be definite and systematic in their teaching of the world's happenings.

In this study it was found that, in general, the smaller the community, the less material is used and the less time is spent on current-events instruction. Sometimes in the smaller communities material —newspaper clippings, for instance—is available but is not used, while in some cases even the simplest sort of material is not available.

A special study was made of Community F, which the tests show

to be the most handicapped with respect to current-events knowledge. The schools in this district suffered severely during the depression. Facilities, aways limited, became more meager. Several teachers made notations on their reports: "We used to have a current-events paper, but owing to the depression we had to drop it." At the time of this study only four of forty-three grade groups were enjoying the benefits of such a publication. These four groups, as well as two others using newspaper clippings systematically, were the only groups having systematic instruction. All the other groups, except four having no current events whatever, received instruction which was rather informal and incidental and which was given with little or no worth-while material at hand.

The schools of the large community cannot properly take all the credit for their superior record in current-events knowledge, nor should the schools of the small community take all the blame for their shortcomings. In Community F there are serious community lacks over which the teachers have no control. The children have only a limited opportunity to see motion pictures, and up-to-date newsreels are an even greater rarity. There are a great many homes without radios, and, what is more surprising, there are many without a daily newspaper. Some of these homes take a country weekly paper devoted chiefly to local news, while a few have no newspaper whatever.

The superintendent of schools reports a large and relatively prosperous section of one of his towns in which not a single family has a radio and not one takes a daily paper. One rural teacher writes: "Three of my five pupils [in Grades VII and VIII] have no daily paper nor radio in the home. The only knowledge of the day comes from our current-events weekly." Another writes: "There are few newspapers in the homes. The only newspaper available for me is ——— [an inexpensive weekly news magazine]. We are using a current-events weekly." Two families are represented in Grade VIII in a small rural school: one has no radio; the other, neither radio nor newspaper. One teacher depends almost wholly on her own radio for news, and she comments: "Few news clippings are available." Another writes: "Some of the children do not have either a radio or a newspaper. That makes it hard for them to enter discussions."

Truly, the most capable and conscientious teacher under such circumstances must find it a problem to get children "to enter discussions." How will these same individuals, grown up, fare in future discussions of social and economic problems? How will democracy fare if too many of us know too little of current affairs?

CONCLUSION

1. The tendency for boys to excel girls in knowledge of current events, which was noted in the author's earlier study confined to one school system, was further confirmed by this study involving seven school systems.

2. In general, it appears that the larger the community in which a school is located, the better the knowledge of current events possessed by its pupils.

3. This relation of current-events knowledge to the size of the community is further emphasized by a comparison of the median totals of certain grade groups taking the tests.

4. The lesser opportunity enjoyed by the small-town and the rural child is still further emphasized by the special study of Community F, where current-events knowledge is at the lowest point.

5. Although variations in the quality of school instruction and in materials result in varied degrees of current-events knowledge, the credit for the results, both good and bad, must be shared by the schools with the community background, which is also a potent factor in determining such knowledge. The newspapers, the radio, the newsreel, all easily available to the child of the larger community, must receive their share of credit for his superior knowledge, while the lack of these same background factors is seriously limiting the opportunities of many small-town and rural children.

6. Until social and economic conditions of smaller communities permit better background opportunities, it is clearly the duty of the schools in such places to compensate for this lack by providing more effective materials and instruction in current events.

If the country is to rely on the combined wisdom of the people for the perpetuation and the welfare of democracy, it is vital that no large group of youths be allowed to grow up lacking in the essential materials of wisdom.

CERTAIN LATERALITY CHARACTERISTICS OF CHILDREN WITH ARTICULATORY DISORDERS

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Certain previous studies (1, 2, 3, 4, 5), together with the writers' clinical observations, have suggested the possibility of a relation between functional articulatory disorders and confusion in the bilateral aspects of neuromuscular organization. The study reported in this article was carried out in the Psychological and Speech Clinic and the Iowa Child Welfare Research Station of the University of Iowa[1] for the purpose of investigating certain laterality characteristics of severe functional articulatory cases and comparing these with the same characteristics in normally speaking children.

SUBJECTS

Forty-one children with articulatory disorders and thirty-three without such disorders served as subjects. The speech-defective children ranged in age from six years and eight months to twelve years and ten months. Twenty-eight were boys and thirteen girls. Mental measurements were made by means of the Stanford Revision of the Binet-Simon Intelligence Scale, and the intelligence quotients ranged from 82 to 124, with a mean of 99.9. The control cases ranged in age from seven years to twelve years and eleven months. Twenty-two were boys and eleven girls. The intelligence quotients on the Stanford-Binet test ranged from 87 to 119, the mean being 102.0.

All the speech cases were taken from the regular speech classes of the public schools in Kenosha, Wisconsin, during the two school years of 1934–35 and 1935–36. These classes included approximately eight hundred children. In order that the group should be as unselected as possible, every child enrolled in the speech classes during the two years of the study who had certain articulatory defects was

[1] Fuller data and materials pertinent to this study are in the manuscript copy of this report on file in the library of the University of Iowa.

considered. From these it was desirable to eliminate any child with an intelligence quotient or an organic defect which might be causally related to the speech disorder. An intelligence quotient of 80 was set up as a minimum. Several cases were thrown out because of difficulty of hearing, paralysis, or poor general co-ordination. Observations of the writers and a statement by the school nurse were the bases for judgment of the physical condition of each child. All other children with the specified speech defects were included except two children who were dropped from the schools before tests were given and five kindergarten children who were too young to be tested successfully on the vertical writing board.

For the control group each speech-defective child was matched with a child of normal speech of the same sex, within six months of the same age and within ten points of the same intelligence quotient. These children were found at the Soldiers' Orphans' Home at Davenport, Iowa; at the State Juvenile Home at Toledo, Iowa; and at the University Elementary School at Iowa City, Iowa. Control cases with the specified requirements were not available for eight of the speech cases. These eight, however, are considered in certain phases of this study.

NATURE OF THE SPEECH DEFECTS

The great majority of articulatory defects fall into two groups: (1) difficulty with *s* and the allied sounds—"ʃ" (as in *shut*), "tʃ" (as in *chair*), and "dʒ" (as in *jump*)—and (2) difficulty with *r* and *l*. Comparatively few persons have trouble with one or more sounds from both groups. Since for this study it was desirable to consider children whose speech defects were serious, no subjects were chosen who had difficulty with sounds in only one of the two groups. Any child who had difficulty with a sound in each of these groups or with a sound in one group and with other sounds (except "θ" as in *thank*, which was usually dialectal) was included. No cases were included whose speech defects might be reasonably accounted for by definite organic deficiencies or deformities.

PROCEDURE

The procedure may be divided into three parts: the selecting of cases, the administering of tests, and the securing of case histories.

Selecting cases.—Regular speech classes were organized after a general and cursory survey of the eleven elementary schools in which speech work was carried on during the two years. A more detailed examination was made during the regular class periods. Each child was asked to repeat after the examiner words containing each of the consonant sounds in the initial and the final positions. The defects noted for each pupil were sounds which the child could not so repeat and in many cases represented only a part of the difficulty. In several instances children were able to form and to use sounds in simple and familiar words for which they made many substitutions or omissions in longer and less familiar words. With one exception, all the speech cases were in class for a minimum of one semester and the majority for an entire year. This period afforded ample opportunity for observation during free speech and allowed the examiner to become thoroughly familiar with the defects of each child.

Administering tests.—As a basis for eliminating cases of low intelligence and for purposes of comparison in selecting control cases, a Stanford-Binet intelligence test was administered.

Ocular dominance was determined by the use of a card 9 by 11 inches with a hole about a half-inch in diameter in the center. The subject held the card in both hands at arm's length and, with both eyes open, looked through the hole at the examiner's nose. A minimum of five trials was made.

An adaptation of the Van Riper simultaneous vertical writing test (6) was given. This test consists of three parts: the drawing of (1) kinesthetic, (2) visual, and (3) script patterns.

1. A simple pattern is formed by a groove in a board. While blindfolded, the subject learns this pattern by tracing with a stylus which he holds in both hands. When the pattern has been learned, a board is placed in a vertical position in front of him and at right angles to the body. Still blindfolded, he draws the pattern on opposite sides of the board with both hands at the same time.

2. The visual pattern is placed above the normal line of vision, and in the same manner as before the subject draws this pattern on the vertical board with both hands simultaneously. Usually a small cardboard is held between the eyes and hands to make sure that the subject is not watching his drawing.

3. For the script test the subject is asked to write the word "cat" in the same manner. Since many first-grade children are more familiar with the writing of their own given name, they are allowed to write that if they prefer. In some cases it is necessary to substitute printing for the script.

The test included four kinesthetic patterns, four visual patterns, and one script, a total of nine responses. It is assumed, on the basis of previous studies (2, 6, 7), that the preferred hand will produce the normal pattern and the non-preferred hand a mirrored pattern. The scores were translated into an index of laterality by using the formula $\frac{R + \frac{1}{2}A}{N}$, in which R represents the total number of patterns drawn correctly with the right hand and mirrored with the left; A represents patterns drawn correctly with both hands, mirrored with both hands, or partly correct and partly mirrored with each hand; and N is the total number of patterns drawn. A purely right-handed performance would result in an index of 1.00 and a purely left-handed performance in an index of 0.00.

Securing case histories.—Case histories were obtained by means of personal interviews with one or both of the parents and with the teacher.

RESULTS

Ocular dominance.—Of the thirty-three matched speech cases, 57.6 per cent were right-eyed, 36.4 per cent were left-eyed, and 6 per cent were amphiocular. Of the thirty-three matched control subjects, 42.4 per cent were right-eyed, 54.5 per cent were left-eyed, and 3 per cent were amphiocular. The difference between the two groups in terms of the percentages of children who were right-eyed was 1.24 times its standard error; in terms of the percentages of pupils who were left-eyed, the difference was 1.50 times its standard error. These differences fall short of definite statistical significance.

Vertical writing test.—Indices for the thirty-three matched speech cases ranged from 0.00 to 1.00, with a median of 0.55. The first quartile was 0.22, and the third quartile was 0.85. The mean index of this group was 0.53. The indices for the thirty-three matched control cases ranged from 0.11 to 1.00, with a median of 0.77. The first quartile was 0.46, and the third quartile was 1.00. For the control

cases the mean index was 0.70.[1] The difference between the median indices of the two groups was 2.36 times its standard error and was therefore indicative, at least, of a true difference.

Of the speech cases, 72.7 per cent had an index below 0.75, or within what might be indicated as the ambidextrous and left-handed range. However, only two of the paired speech cases, or 6 per cent, were known as left-handed. Of the control cases, 45.4 per cent had an index below 0.75. Two of these cases, or 6 per cent, were known as left-handed. The difference between 72.7 per cent and 45.4 per cent was 2.33 times its standard error and tended, therefore, to be indicative of a true difference.

Case analyses.—Since the majority of the control subjects were obtained in institutions and since case histories were not available, this part of the study is not comparative. It deals with forty-one speech cases.

Abnormal birth conditions were found in eight cases, or 20 per cent of the group. Ten of the cases, or 24 per cent, may be said to have had serious illnesses or injuries, the term "serious" being used in a liberal sense.

Twelve per cent of these children were late in speech development, most of them beginning to talk at about three years. Twelve per cent had been reported by the teacher as having definite reading or spelling disabilities. Seven cases, or 17 per cent, had relatives who stuttered or had stuttered. In four cases these were members of the immediate family: parents, brothers, or sisters. Sixteen cases, or 39 per cent, reported oral inaccuracies among relatives. In thirteen cases these relatives were in the immediate family.

Twenty-four cases (59 per cent) had a total of forty-five relatives who were known to be left-handed or definitely ambidextrous. Eleven of these cases had a total of sixteen members of the immediate family who were left-handed or ambidextrous. Four (10 per cent) of the cases were left-handed. In every instance there had been an attempt to make the child right-handed. Fifteen per cent of the cases were ambidextrous, using the least preferred hand in many activities.

[1] Milisen and Johnson (2) administered this test to an unselected sample of 120 children and obtained a mean index of 0.78.

Twelve cases (29 per cent) had had definite interference with handedness development either through training or injury. These include the four left-handed children mentioned above with whom efforts to shift the handedness were not successful.[1]

If it is assumed that interference with native handedness would cause some degree of confusion in lead, the two groups—the ambidextrous children and those for whom there had been some interference with handedness—contained fourteen cases (34 per cent) who had or had had confusion in motor lead.

The percentages in this analysis are probably affected by the fact that in some instances histories were not available or were meager. All cases were retained in this part of the study, however, in order that the speech-defective group might remain unselected.

Although histories were not available for the control cases, a few facts were obtained from these children concerning handedness or speech in the immediate family. It is to be understood that these would be too meager or unreliable to be used for comparison. Six of the thirty-three told of relatives in the immediate family who were left-handed. Two were themselves left-handed. Two had members of the immediate family who had stuttered.

SUMMARY AND CONCLUSION

Forty-one speech cases with severe functional articulatory defects were selected from the eight hundred children enrolled in the regular speech classes of the Kenosha, Wisconsin, schools during the two school years 1934–35 and 1935–36. Control cases, matched by sex, age, and intelligence quotient, were found for thirty-three of the speech cases.

More of the control group than of the speech group were found to be left-eyed. The difference between the groups in this respect was not statistically significant.

As measured by an adaptation of the Iowa simultaneous writing test, the control cases showed a noticeably greater degree of right-handedness. The difference between the groups on the basis of this test came near to being statistically significant.

[1] Histories of these twelve cases are included in the manuscript copy of this report on file in the library of the University of Iowa.

A fifth of all the speech-defective subjects showed a history of apparently abnormal birth conditions, and a fourth had had severe illnesses or injuries—factors which might have had an influence on speech development.

It is probable that one-third of the speech defect cases had or had had confusion in motor lead, as indicated by case histories and observational evidence.

The results of this investigation warrant the conclusion that handedness, as measured, tends to be related to severe functional articulatory defects. The findings with regard to eyedness, however, were not significant. The defective-speech cases, as a group, presented a greater proportion of right-hand reversals (indicative of left-handedness) on a simultaneous-writing test than did a group of normal speakers matched for sex, age, and intelligence quotient. It would seem that this finding can be best interpreted in terms of the concept of hemispherical dominance as presented by Travis (5). Further research on this problem is undoubtedly warranted in view of the obviously important implications of such results as are here reported.

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3. NICE, MARGARET MORSE. "Ambidexterity and Delayed Speech Development," *Pedagogical Seminary*, XXV (June, 1918), 141–62.
4. ORTON, SAMUEL T. "Word-Blindness in School Children," *Archives of Neurology and Psychiatry*, XIV (November, 1925), 581–615.
5. TRAVIS, LEE EDWARD. *Speech Pathology*. New York: D. Appleton & Co., 1931.
6. VAN RIPER, C. "A New Test of Laterality," *Journal of Experimental Psychology*, XVII (April, 1934), 305–13.
7. VAN RIPER, C. "The Quantitative Measurement of Laterality," *Journal of Experimental Psychology*, XVIII (June, 1935), 372–82.

SELECTED REFERENCES ON ELEMENTARY-SCHOOL INSTRUCTION

I. Curriculum, Methods of Teaching and Study, and Supervision

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In this bibliography are included selected publications in the field of the elementary-school curriculum, methods of teaching and study, and supervision of elementary-school instruction which appeared during the period from April 1, 1936, to March 31, 1937. Foreign-language titles are not included, nor have popular articles on the topics been cited unless they present facts not generally known or an original and challenging point of view. The materials on curriculum and methods deal with general aspects of these topics; studies dealing with specific subjects will be listed in subsequent issues.

Curriculum[1]

387. Babcock, Russell B. "A Seventh Grade Course in Sex Education," *Progressive Education*, XIII (May, 1936), 374–82.

Discusses content and procedures of a course in sex education given in the schools of Winnetka, Illinois.

388. *A Correlated Curriculum.* A Report of the Committee on Correlation of the National Council of Teachers of English. New York: D. Appleton-Century Co., Inc., 1936. Pp. xvi+326.

Does not support the abolition of subjects but rather urges unification through selectivity and the building-up of natural relationships.

389. Dawson, Mildred A. "Children's Preferences for Conversational Topics," *Elementary School Journal*, XXXVII (February, 1937), 429–37.

Presents data on conversational preferences which should be considered in organizing the language-composition curriculum.

[1] See also Items 408 (Buckingham and Dolch) and 457 (Fitzgerald) in the list of selected references appearing in the October, 1936, number of the *Elementary School Journal;* Items 182 (Andrus and Associates), 214 (Hockett and Neeley), and 216 (Miller) in the April, 1937, number of the *Elementary School Journal;* Item 22 (Judd) in the January, 1937, number of the *School Review;* and Item 99 (Marshall and Goetz) in the February, 1937, number of the *School Review.*

390. FELDMAN, ESTELLE E. "The Dull Child and the Junior High School Curriculum," *Journal of Experimental Education*, V (December, 1936), 206–11.

An experimental study of the need for providing a differentiated program for dull children at all levels of the school.

391. HEATON, KENNETH L. "State Curriculum Programs for 1936–1937," *Curriculum Journal*, VIII (February, 1937), 42–48.

An analysis of curriculum work being done by state departments of education.

392. *International Understanding through the Public-School Curriculum*. Prepared by the Society's Committee on International Understanding. Thirty-sixth Yearbook of the National Society for the Study of Education, Part II. Bloomington, Illinois: Public School Publishing Co., 1937. Pp. xii+364.

Describes methods and materials of instruction calculated to produce a better understanding of international relations.

393. KELTY, MARY G. "Recent Trends in the Social Studies for the Middle Grades," *Elementary School Journal*, XXXVII (December, 1936), 257–67.

Discusses problems incidental to four major curriculum trends: (1) the activity program, (2) fusion or integration, (3) threads of institutional developments, and (4) separate subjects.

394. KNUDSEN, CHARLES W. "What Do Educators Mean by 'Integration'?" *Harvard Educational Review*, VII (January, 1937), 15–26.

A critical résumé of points of view concerning the integration of the subjects in the curriculum.

395. *Louisiana Program of Curriculum Development*. Study Program. Bulletin No. 324. Baton Rouge, Louisiana: Louisiana State Education Department, 1936. Pp. 166.

A description of the Louisiana plan for organizing teachers for the study of the curriculum.

396. MAYHEW, KATHERINE CAMP, and EDWARDS, ANNA CAMP. *The Dewey School*. New York: D. Appleton-Century Co., Inc., 1936. Pp. xvi+490.

A historical review of the Laboratory School of the University of Chicago, 1896–1903.

397. NOYES, DOROTHY. "Finding Social Mathematics in School Activities," *Mathematics Teacher*, XXIX (November, 1936), 340–45.

A general discussion of the means used by a teacher to vitalize arithmetic instruction by using applications arising in any other subject.

398. ORATA, PEDRO T. "Conflicting Viewpoints in Contemporary American Education," *Educational Administration and Supervision*, XXII (April and May, 1936), 299–313, 361–74.

The first article, "Traditional and Scientific Education," discusses practices of curriculum-making growing out of the concept that learning is specific, which leads to the analytical approach in curriculum-making. The second article, "'Fifty-seven Varieties' of Progressive Education," gives a summary of points of view on progressive education expressed by writers differing widely in their conceptions of the movement.

399. PARKER, J. C. "Organization of a City School System for Effective Curriculum Development," *Curriculum Journal*, VII (November, 1936), 8–15.

Contains data concerning plans used in various cities for organizing programs of curriculum development.

400. STREITZ, RUTH. "When Should Reading Experiences Begin?" *Progressive Education*, XIII (May, 1936), 325–32.

A critical review of studies dealing with the question of the point at which reading instruction should begin.

401. THORNDIKE, EDWARD L. "The Vocabulary of Books for Children in Grades 3 to 8," *Teachers College Record*, XXXVIII (December, 1936; January and February, 1937), 196–205, 316–23, 416–29.

Part I lists and discusses words outside the Thorndike list of twenty thousand which were found in four and a half million words from books recommended for pupils in Grades III–VIII. Part II is concerned with the differences in vocabulary of 120 juvenile books and the vocabulary of the 279 sources used in determining the Thorndike list of twenty thousand words. Part III deals with the frequency of occurrence of various words in books recommended for pupils in Grades III–VIII.

402. *The Unique Function of Education in American Democracy*. Washington: Educational Policies Commission of the National Education Association and the Department of Superintendence, 1937. Pp. 130.

A treatise on the history of education in the United States and a statement of the function of education in directing the processes of enlightenment and discussion by which matured decisions relative to curricular issues are arrived at.

403. WASHBURNE, CARLETON, and MORPHETT, MABEL VOGEL. "Manuscript Writing—Some Recent Investigations," *Elementary School Journal*, XXXVII (March, 1937), 517–29.

Presents results of recent investigations of manuscript writing at various grade levels.

METHODS OF TEACHING AND STUDY[1]

404. BODE, BOYD H. "Education as Growth: Some Confusions," *Progressive Education*, XIV (March, 1937), 151–57.

Points out that "basic reconstruction" of experience must meet the legitimate requirements of both "growth" and "direction."

405. BREIDENSTINE, A. G. "The Educational Achievement of Pupils in Differentiated and Undifferentiated Groups," *Journal of Experimental Education*, V (September, 1936), 91–135.

Reports equal results on an achievement test after a year for groups in Grades II–IX when grouped according to mental ability and when not so grouped. No differences in content of curriculum were involved.

406. BROWN, FRANCIS J. "An Investigation in Character Education," *Journal of Educational Research*, XXX (September, 1936), 14–19.

Reports a list of unfavorable traits developed through school experience reported by pupils and recommends steps for developing a program in character education.

407. BURNS, ZED H. "Practice, Variability, and Motivation," *Journal of Educational Research*, XXX (February, 1937), 403–20.

Summarizes an investigation dealing with motivation and its effects on learning.

408. CONNOR, WILLIAM L., and HAWKINS, GERTRUDE C. "What Materials Are Most Useful to Children in Learning To Solve Problems?" *Educational Method*, XVI (October, 1936), 21–29.

Reports that the best materials consist of "problems selected by pupils themselves from their environment to illustrate the processes they are expected to learn."

409. CORNELL, ETHEL L. *The Variability of Children of Different Ages and Its Relation to School Classification and Grouping*. Educational Research Series, 1937, No. 1. Bulletin of the University of the State of New York, No. 1101. Albany, New York: University of the State of New York, 1937.

Reports range of performance of children of ages seven, ten, and fourteen, regardless of their grade classifications, in achievement and mental age. Describes the complications for grouping.

410. GATES, ARTHUR I. "The Necessary Mental Age for Beginning Reading," *Elementary School Journal*, XXXVII (March, 1937), 497–508.

Presents data showing that teaching methods and materials are important factors in the mental level required for beginning reading.

[1] See also Item 429 (Worlton) in the list of selected references appearing in the October, 1936, number of the *Elementary School Journal;* Items 203 (Smith and Jensen) and 221 (Van Alstyne, Hattwick, and Totten) in the April, 1937, number of the *Elementary School Journal;* Item 489 in the September, 1936, number of the *School Review;* and Item 354 in the May, 1937, number of the *School Review*.

411. GATES, ARTHUR I., and BOND, GUY L. "Some Outcomes of Instruction in the Speyer Experimental School (P.S. 500)," *Teachers College Record*, XXXVIII (December, 1936), 206–17.

Describes the effectiveness of an activity program used as the basis of reading instruction for dull-normal pupils.

412. GEYER, DENTON L. "The Results of Activity Instruction," *Journal of Educational Research*, XXX (November, 1936), 188–97.

An evaluation of published researches on the results of "activity" instruction.

413. HARDY, MARTHA CRUMPTON. "Improvement in Educational Achievement Accompanying a Health Education Program," *Journal of Educational Research*, XXX (October, 1936), 110–23.

Reports a general improvement in educational achievement growing out of a corrective, developmental health program.

414. HARDY, MARTHA CRUMPTON, and HOEFER, CAROLYN H. *Healthy Growth.* Chicago: University of Chicago Press, 1936. Pp. xii+360.

Presents the results of a study of the influence of a well-organized program of health education on the growth and the development of school children.

415. HATTWICK, BERTA WEISS, and STOWELL, MARGARET. "The Relation of Parental Over-attentiveness to Children's Work Habits and Social Adjustments in Kindergarten and the First Six Grades of School," *Journal of Educational Research*, XXX (November, 1936), 169–76.

Reports data showing the importance to the pupil of a well-adjusted home as a basis of successful work in school.

416. JAYNE, C. D. "The Integrated versus the Non-integrated Use of Moving Pictures in the Classroom," *Journal of Experimental Education*, V (September, 1936), 7–16.

Reports that children learn more when the use of motion pictures is integrated with a discussion of topics than when the pictures are used incidentally.

417. JONES, VERNON. *Character and Citizenship Training in the Public School.* Chicago: University of Chicago Press, 1936. Pp. xii+404.

Reports results of an experimental study of three specific methods of character education. It is shown that the method using firsthand experience and discussion is more effective than either method used alone.

418. KELTY, MARY G. "Adjustment of the Materials of the Social Sciences to the General Mental Development of Children in the Middle Grades," *Educational Method*, XVI (December, 1936), 113–20.

Discusses organization of materials and principles of teaching adapted to wide variations in abilities of pupils.

419. KYTE, GEORGE C. "Causes of First-Grade Nonpromotion in the Light of Measured Intelligence," *Elementary School Journal*, XXXVII (February, 1937), 415–28.

Presents data showing the importance of determining why many nonpromoted children of normal intelligence fail to make normal progress.

420. ORATA, PEDRO T. "Transfer of Training and Reconstruction of Experience," *Mathematics Teacher*, XXX (March, 1937), 99–109.

Discusses the development of number as a mode of thought and as an intellectual tool through its use in social experiences rather than as an isolated subject.

421. PERTSCH, C. FREDERICK. "A Comparative Study of the Progress of Subnormal Pupils in the Grades and in Special Classes." Brooklyn, New York: C. Frederick Pertsch (Public School 29), 1936. Pp. 102.

Shows greater academic attainment in nonsegregated groups than in segregated groups. Personality ratings are also markedly higher in nonsegregated groups.

422. POSTEL, HAROLD H. "The Effect of Adapting Reading Materials to Seriously Retarded Pupils," *Elementary School Journal*, XXXVII (March, 1937), 536–40.

Discusses the importance of adapting reading materials to the maturity of retarded pupils.

423. SEARS, JESSE B. "Some Aspects of the Problem of Homogeneous Grouping," *Educational Administration and Supervision*, XXII (October, 1936), 499–511.

Discusses the issue from the point of view of conflicting outcomes and procedures of two programs of training: direct instruction in predetermined subject matter and a program of social life.

424. TATE, HARRY L. "An Evaluation of the Project Method," *Elementary School Journal*, XXXVII (October, 1936), 122–32.

Reports results of an experimental study of a project curriculum. The outcomes were not favorable to such a program.

425. TAYLOR, EARL A. *Controlled Reading*. Chicago: University of Chicago Press, 1937. Pp. xxviii+368.

Describes improved techniques for appraising visual handicaps that interfere with reading progress and means of correcting such difficulties.

426. TIEGS, ERNEST W. "Breaking Down the I.Q.," *Progressive Education*, XIII (December, 1936), 603–5.

Describes a new type of intelligence test consisting of verbal and nonverbal measures and an automatic diagnostic profile of maturity in five general factors and in sixteen more specific types of activity.

SUPERVISION[1]

427. BRIGGS, THOMAS H. "Should Education Indoctrinate?" *Educational Administration and Supervision*, XXII (November, 1936), 561–93.

Sets up eight principles to guide the schools in the development of individuals for effective participation in a democratic society.

428. DALE, EDGAR. "When and How Shall We Use the Motion Picture?" *Progressive Education*, XIII (October, 1936), 437–42.

Reviews the studies that have been made of motion pictures in the schools and discusses their use "as a device for facilitating socially beneficial behavior."

429. *The Development of a Modern Program in English.* Ninth Yearbook of the Department of Supervisors and Directors of Instruction of the National Education Association. Washington: Department of Supervisors and Directors of Instruction of the National Education Association, 1936. Pp. xii+194.

Discusses means of improving instruction in English in the schools.

430. *Educational Sociology.* Review of Educational Research, Vol. VII, No. 1. Washington: American Educational Research Association of the National Education Association, 1937. Pp. 1–112.

A review of research dealing with educational sociology and its implications for curriculum-making, of research in delinquency, and of research on the relations of the schools and other community agencies.

431. FEANY, P. J. "A Survey of Instructional Practices and Equipment Used in Observed Lessons in the Social Studies in Grades Six, Seven, and Eight, in Selected Cities of the Middle West," *Journal of Educational Research*, XXX (January, 1937), 348–56.

Reports results of observed lessons in social studies showing objectives, procedures, class organization, and materials used.

432. FLORY, CHARLES D. "Cumulative Records for Research Purposes," *Journal of Educational Research*, XXX (November, 1936), 157–68.

Outlines the essentials of an integrated functional record system.

433. *The Improvement of Education.* Fifteenth Yearbook of the Department of Superintendence of the National Education Association. Washington: Department of Superintendence of the National Education Association, 1937. Pp. 328.

Presents the view that "social inadequacies may be alienated through a properly planned system of education."

[1] See also Items 6 (Judd), 17 (Whipple), 40 (Otto), and 48 (Rogers) in the list of selected references appearing in the January, 1937, number of the *Elementary School Journal;* Item 318 (Otto) in the May, 1937, number of the *Elementary School Journal;* Item 573 (Simon) in the November, 1936, number of the *School Review;* Item 47 in the January, 1937, number of the *School Review;* and Items 336 (Judd, Breslich, McCallister, and Tyler) and 353 in the May, 1937, number of the *School Review.*

434. SEGEL, DAVID. "A Critique of the Elementary-School Graduation Examination," *Elementary School Journal*, XXXVII (March, 1937), 530–35.

Recommends that learning examinations be eliminated and that stress be placed on the guidance value of a continuous systematic testing program.

435. SHANNON, J. R. "Teachers' Attitudes toward Supervision," *Educational Method*, XVI (October, 1936), 9–14.

A report of a questionnaire study of teachers' attitudes toward supervision.

436. TOSTLEBE, M. F. "Analysis of the Relative Importance of the Success Factors Common in the Training of Teachers for the One-Room Rural School," *Journal of Educational Research*, XXX (February, 1937), 397–402.

Reports evaluations given by college specialists and county superintendents to 135 "success factors" for teachers of one-room rural schools.

437. VAN ANTWERP, HARRIET. "Teachers' Evaluation of the Effectiveness of Supervisory Activities," *Educational Method*, XV (May, 1936), 441–47.

Reports a study of teachers' evaluations of supervisory visitation practices, conferences, bulletins, and meetings.

438. ZYVE, CLAIRE T. "Recording the Changing Life of the School," *Progressive Education*, XIII (December, 1936), 621–30.

A description of the kinds of records that should be kept to enable the school to conduct an efficient program suited to individual needs and to measure the effectiveness of the programs.

Educational Writings

REVIEWS AND BOOK NOTES

Methodology-of-research milestone.—By recording the thoughts that chased through my mind and found embodiment in fragmentary phrases as I finished reading the book by Good, Barr, and Scates,[1] I shall best enable the reader to feel my reactions to it: "A notable book; the best on the methodology of research yet published; a most comprehensive conception of research; well-balanced presentation, supported by an amazingly thorough and laborious documentary study; eminently fair to contemporaries and their predecessors; exceptionally sensitive to recent developments in widely scattered areas; an excellent and much-needed treatment of the historical and the case-study methods of research; puts statistical methods and other technical procedures in second place, where they belong; a delight—and a disappointment."

Why a disappointment? Up to 1923 there were no books on the methodology of educational research except books on statistical methods and measurement. The part was attempting to be the whole. In that year I published *How To Experiment in Education* (New York: Macmillan Company). In that book measurement and statistical methods were accorded only their due emphasis in the total functioning procedure. Like most pioneer books, it was full of faults. I have been hoping that each new book which appears would enable me to shelve mine. Carter Good's excellent treatise *How To Do Research in Education* (Baltimore: Warwick & York, Inc., 1928) and Harold H. Abelson's later and even better book *The Art of Educational Research* (Yonkers-on-Hudson, New York: World Book Co., 1933) supplemented rather than replaced my faulty one. The latest book likewise disappoints. Technical procedures are a requisite portion of the total research process. To omit them is to leave the student unequipped to proceed. To stress, as the book under review does, the common sense of research is to go to the other extreme and, worse still, is to stress that portion of the research process which the student of education is most likely to be able to provide for himself. The student who wishes to master research procedure must supplement this book with others which supply the missing links.

In all fairness it should be said that the authors have devoted themselves to

[1] Carter V. Good, A. S. Barr, and Douglas E. Scates, *The Methodology of Educational Research.* New York: D. Appleton-Century Co., Inc., 1936. Pp. xxii+882. $3.75.

developing the portion of the research process which most needs elaboration at this time and that educational historians will give them greater credit for being a bit careless of current helpfulness to individual students. The authors were acutely aware of what they were doing, as witness their words of defense: "Students (and often instructors) become so concerned with the details of statistical procedures in the abstract that they lose sight of the larger background of thought and purpose into which these procedures must fit. . . . . A concentrated emphasis upon the narrower, technical aspects of certain portions of research . . . . is the province of specialized texts" (p. 602). There is, however, another and, I believe, a better way out.

The book disappoints by being "sprawly," that is, by failing to achieve a genuine functional integration of all phases of the scientific process, including an integration of these with philosophy. The authors fail to note how all the common scientific formulas feed up through a hierarchy of formulas converging on a super-formula where science and philosophy meet happily. In addition, they commit the conventional error of many scientists, who confuse the objective and the quantitative and overstress the objective and abuse the subjective, thus contributing further to the unhappy conflict between science and philosophy (pp. 13–14). Science should recognize that the objective is no more than the consensus of the subjective; that science itself is as deeply concerned with value or feeling as is philosophy; and that there are times when, even to science, the subjective is preferable to the objective.

The main thought I wish to leave with the reader, however, is that I consider this book the best yet published on the subject and that I gladly pay the authors the compliment of my envy.

WILLIAM C. MCCALL

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A systematic approach to psychology.—There was a time when the really competent textbooks in psychology could be counted on the fingers of one hand. In the last decade and a half, however, such enormous advances have been made that the student is no longer restricted to a narrow range of titles in order to gain an introduction to the study of human behavior. The outstanding feature of most modern textbooks in psychology is a kind of eclecticism which leaves the reader with much factual material but with no systematic viewpoint. Even today the really competent *systematic* treatises in psychology are few in number. It is therefore an occasion of genuine importance to note the appearance of an extensive revision of one of the conspicuous examples of a systematic introduction to psychology.[1]

The first edition of this book appeared in 1922 under the title of *Elements of Scientific Psychology*. The second edition has been amended so completely that the adoption of a new title has seemed appropriate. At the outset, the reader of

[1] Knight Dunlap, *Elements of Psychology*. St. Louis: C. V. Mosby Co., 1936. Pp. 500. $3.00.

this review should be reminded of the influence and the significance of the first edition. Professor Dunlap was one of the leading skeptics in the instinct controversy which flourished in the academic literature of the early 1920's. In the 1922 edition of his book he emphatically rejected instincts as a principle explaining human behavior, and he urged the adoption of responses or reactions as the physiological basis of conscious processes and rejected the traditional doctrine of images as unique mental entities.

In the present edition the author makes new advances in the discussion of several topics. For example, he elaborates a distinctive theory of desires and emotion. He also presents a fundamental revision of the principle of learning, the culmination of work begun in 1928. This new approach to the problem of learning is perhaps the most unique contribution which the new edition makes to the field of psychology, and it should be a matter of fundamental concern to students working in the field of education.

The following titles of the chapters with the percentage of space devoted to each chapter will give some idea of the content of the book and the relative emphasis placed on each topic: "Introduction," 7 per cent; "The Senses," 14 per cent; "The Bodily Mechanism," 6 per cent; "Types of Response," 8 per cent; "Perceptual Responses," 9 per cent; "The Perception of Space and Time," 11 per cent; "Thought and Thought Content," 8 per cent; "Feeling and Affects," 6 per cent; "Learning," 7 per cent; "Psychological Measurements," 6 per cent; "Individual Differences," 9 per cent; "Maladjustment and Readjustment," 5 per cent.

In the Preface the author so frankly and explicitly expounds his plan of writing the book and its use as an instrument of instruction that to the reader who may be pedagogically inclined a rather full quotation will be revealing:

> I have not attempted to prepare "easy steps for little feet." There is a plenitude of books which are available to those who wish a text of that sort. I have attempted to write a book which shall be worth serious study, and which should repay the labor of which the average undergraduate is capable. If it should turn out to be suitable for the student unwilling to work, or of dull understanding, I should be deeply disappointed, for such a book is necessarily a failure. I have sought for clarity and precision rather than simplicity, and have included deliberately much repetition. The absence of copious experimental material needs no apology in a book designed as an introductory text. The introduction of such material as is appropriate to a particular class is a part of the instructor's task, and this text is by no means intended to supplant the teacher or to render his task a sinecure. Much as the lecture system has been maligned, I still believe that the living word is the superior method of elementary instruction and that reading matter should furnish an adequate basis for vitalization by lectures. I deplore the assignment of large quantities of outside reading which the student too often is incapable of digesting, and which creates confusion rather than orientation. Experimental work for elementary students, especially in large groups, degenerates almost of necessity into busy work of a trivial nature, which not only wastes the student's time but also gives him either a contempt for experimental psychology or else a fallacious belief that he has an important grasp on it. Adequate demonstrational work, on the other hand, is an important supplement to lectures and reading [pp. 8–9].

In addition to the features emphasized in the preceding quotation, the reviewer would like to call attention to other salient characteristics of the book. In the first place, the author states his case with clarity and precision. For example, he devotes ten pages to a helpful glossary. He adds a section of "Notes" to many chapters, making clear-cut distinctions in terms. He expounds his concepts carefully and makes meticulous use of technical words. His explanation for the spelling of the Russian physiologist's name (contrary to common usage) as *Pavloff*, and his use of the word "memoric" instead of the word "mnemonic" are two typical examples of this quality of his exposition. In the second place, the presentation is systematic. This system is achieved by a constant stress on consistency of interpretation, the display of a rigorous scientific temper, and a persistent emphasis on responses as a basic category in psychology. In the third place, the author's approach is strictly independent. It is true that he displays the orthodox tradition of Wundt in the large amount of space given to sensation and perception and that he reflects the trend of the behaviorists in his emphasis on responses; but in both cases he makes his own exposition, borrows very lightly from other writers, makes few acknowledgments of indebtedness, and apparently delights in exposing the muddy and confused thinking of other writers.

The book, however, is not controversial. It is not, in spite of its own systematic approach and its critical temper, an exposition of contrasting viewpoints in psychology. The terms "behaviorism," "structuralism," "functionalism," and "Gestalt" never appear in the book as labels for schools or systems of psychological interpretation.

If one bears in mind that the book under review is written as an introduction to psychology, most of the criticisms which may occur to the critical reader are irrelevant. Some readers might object to the overloading of certain topics and the relative neglect of others (for example, compare sensation, perception, thought, and personality); others might object to the heavy style and the parsimonious documentation; but any fair-minded appraisal compels acknowledgment that here is a thoroughly disciplined, cautious, stimulating, and basic introduction to psychology by one of the outstanding leaders in the field. Students of education as well as members of the psychological tribe must therefore give heed to the contributions of this significant treatise.

HOWARD Y. MCCLUSKY

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Some American cultural borrowings from Germany.—A slight monograph,[1] based on a paper presented in July, 1935, at a round table on American-German relations held in connection with the Institute of Public Affairs at the University of Virginia, has come from the press. It upholds the thesis that German influ-

[1] John A. Walz, *German Influence in American Education and Culture.* Philadelphia: Carl Schurz Memorial Foundation, Inc. (225 South Fifteenth Street), 1936. Pp. 80.

ence on American education and culture during the nineteenth century has been beneficial and profound. The study presents brief accounts of the beginnings of the study of German language and literature in the United States, of the many studies of the schools of Prussia circulated in America during the period of the common-school revival, of the establishment of the kindergarten in America, of the influence of Prussia on the university and school system of Michigan, of German influence on American universities, of the German element in New England transcendentalism, and of the St. Louis movement in philosophy.

With respect to its scope of interest, sources examined, and method of treatment, the book is limited far more than is apparent from the title. The influences of the plain German people of America, with their German-language press, their schools, churches, and German societies, are not studied. The German element had an important part in the councils of the Republican Party just at the time when Republican congresses were enacting the legislation under which the land-grant colleges and the United States Bureau of Education were set up. These matters, however, are outside the book's interest. Nor does the book treat of the influence of Herbart or Wilhelm Wundt on American school practice. Neither is there mention of the possible influence of Karl Marx on American political theory and practice.

To indicate the extent and the value of the German contribution to American education and culture, Walz cites statements from nineteenth-century lectures and popular writings. He has attempted no survey of studies in the field of the history of education in the United States, nor does he make any great use of the studies of the settlements and activities of Germans in the United States. Critical studies in both these fields hold much that is of interest to the student of the extraordinarily interesting and important topic of German influence on American education.

CHARLES F. ARROWOOD

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Principles and methods of personality adjustment.—There is no more strategic point at which the principal may make his leadership felt than in the solution of problems relating to the growth and success of the boys and girls under his tutelage.

In conference with a teacher about a child, the principal is not passing judgment on the technical preparation and the procedures employed by the teacher. Rather, he is a co-seeker with the teacher, in search of ways and means of furthering pupil success. Method, curriculum, and management—all fall into their natural perspectives as means to this fundamental end.

Principals have sensed this fact, but they have hitherto been greatly handicapped by the paucity of well-organized literature on guidance. It has been necessary to do much winnowing in several fields in order to segregate here and there materials which are capable of practical application. In the Fifteenth

Yearbook[1] the Department of Elementary School Principals has sought to meet this need.

> Generally speaking, school practice lags far behind the scientific knowledge which child-guidance specialists have accumulated in recent years. In this yearbook the Editorial Committee has attempted to combine a presentation of basic principles with practical suggestions which may be used in every elementary school. The book is not an encyclopedic or technical treatise on the psychology of behavior. It is designed for busy school people who wish to understand and guide their pupils better [p. 227].

Thus avowing its practical aims, the Editorial Committee, consisting of Samuel Berman (chairman), Bess Clement, and Maude McBroom, presents the Fifteenth Yearbook of the Department of Elementary School Principals under the title *Personality Adjustment of the Elementary-School Child.*

While thus committed to practical emphasis, the yearbook has fortunately avoided the error of dealing merely with symptoms. Emphasis is focused on the discovery and the remedial treatment of conditions underlying maladjustment.

The general outline of the yearbook is well planned. Several articles are contributed by specialists under each of the following chapter headings: "The Nature and Needs of the Child," "Out-of-School Factors Affecting Child Adjustment," "Adapting the School to Children's Needs," "The Teacher's Influence on Pupil Personality," "Types and Symptoms of Pupil Maladjustment," "Discovering and Evaluating Causes of Behavior Problems," "Applying Specific Remedial Measures," and "The Service of Specialists in Child Care and Adjustment." The book is completed with a "Summary of Selected Research Studies."

Excellent materials for study with groups of teachers and parents are afforded by many of these articles, for example, the article on "The Child-Guidance Conference for Handling Problem Cases" by Norman Fenton and Albert D. Graves, Principal F. B. Smith's contribution, "The Co-operation of Community Agencies in a Program of Child Guidance," as well as numerous others.

The issues presented are fundamental, and the prose style is conducive to easy reading. The Editorial Committee has succeeded in reducing the number of technical expressions which sometimes clutter up materials of this kind; and this fact, with the frequent use of illustrative cases, adds greatly to the utility as well as the general interest of the yearbook. The chapters are well documented and rich in selected references for persons who desire to read more extensively.

While the committee is to be commended for assembling a valuable body of materials, it must be recognized that the publication of a yearbook such as this is only a preliminary step. Still remains the old challenge to principals and school administrators generally: making knowledge effective in modifying the life of the schools. So far as the Fifteenth Yearbook is concerned, this result can

[1] *Personality Adjustment of the Elementary-School Child.* Fifteenth Yearbook of the Department of Elementary School Principals. Bulletin of the Department of Elementary School Principals, Vol. XV, No. 6. Washington: Department of Elementary School Principals of the National Education Association, 1936. Pp. 227–672. $2.00.

only be accomplished by gaining the sympathetic understanding and interest of the teaching staff and by assisting them in discovering how to apply to practical, everyday school situations the suggestions that the book offers.

The Fifteenth Yearbook, then, should be on the desk of every principal and superintendent of schools, but its presence on the executive's desk will by no means insure any modification of existing procedures. Only when the yearbook is understood and applied by teachers and counselors and by others who are responsible for promoting the day-to-day success of boys and girls can progress be made.

WORTH MCCLURE

SUPERINTENDENT OF SCHOOLS
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Methods of improving reading in the primary grades.—During recent years serious effort has been made by writers of professional books on reading to interpret to teachers in simple terms the results of scientific principles that underlie efficient teaching. This trend is admirably exemplified in a book by Clarence R. Stone.[1] As indicated by the title, the author has directed attention to the problems of teaching reading in the lower grades. By so doing, he has been able to discuss specifically and in detail a wide range of problems concerning which most teachers and school officers are urgently in need of added insight and guidance.

As indicated in the Preface, this book is planned "for teachers and supervisors in service and as a textbook in courses in reading." It presents "solutions to present-day problems in primary reading in a concrete way," by "applying the findings of research bearing upon these problems" (pp. v–vi) and by utilizing previously unpublished research studies made by the author. Stone has approached his task constructively and critically; he has attempted to face problems frankly, to see "evident pitfalls," to avoid "extreme" positions, to utilize "whatever is valid and practical from both the old and the new," and to question "anything in current theories and practices tending to produce problem cases in reading" (p. vi).

A fundamental assumption which underlies the various chapters of the book is that a real need exists "for decided improvement in reading instruction in the lower grades" (p. 1). In support of this view the first chapter presents a series of facts and conditions that are both illuminating and convincing. Stone believes that the solution lies largely in "adapting reading instruction to the varying needs of the pupils in a particular class, grade, or half-grade" (p. 2). The chief purpose of the various chapters following chapter i is to describe an adequate program of teaching in a concrete and a detailed form.

The general scope and content of the book is suggested by the following chapter titles and explanations: "A Flexible Course of Study Outlined," which pre-

[1] Clarence R. Stone, *Better Primary Reading:* How To Adapt Reading Instruction to the Varying Needs of the Children. St. Louis, Missouri: Webster Publishing Co., 1936. Pp. xvi+536.

sents major aims, standards of attainment, and materials; "A Graded Vocabulary for Primary Reading," which describes the methods used in selecting and grading the two thousand words listed in the chapter; "Fundamental Habits Essential to Better Primary Reading," which reviews the most important contributions of scientific studies relating to basic reading habits; "Need of Better Balance in Beginning Methods," which includes a detailed evaluation of typical methods of teaching reading; "The Road to a Better Start in Reading: Level I," which deals at length with problems relating to reading readiness and with the materials and methods of beginning reading; "The Road to Better Beginning Book Reading: Levels II–IV," which presents a series of guiding principles underlying group reading and describes related practical procedures and the characteristics of beginning books in reading; "Period of Rapid Progress: Levels V–VIII, Grades 2–3," which considers the problems that are usually encountered in Grades II and III; "Developing Accuracy, Fluency, and Independence in Word Recognition"; "Independent Activities, Including Seatwork Reading"; and "Prevention, Diagnosis, and Instruction of Problem Cases in Reading."

As indicated by the foregoing outline, Stone relates his major constructive suggestions to certain stages, or levels, of progress in learning to read. This procedure harmonizes with progressive trends in organizing programs of reading instruction. However, Stone defines levels of progress largely in terms of school grades and available types of reading material. This plan has certain practical advantages since most schools still retain a more or less rigid plan of classification by grades and half-grades. If instruction is to be adapted increasingly to stages of child development, it seems advisable that in the future minor emphasis be given to grade levels in organizing appropriate types of instruction and in defining the successive stages of progress through which pupils pass in learning to read.

For the type of organization suggested, the author has prepared an extremely practical discussion of reading problems. He utilizes effectively the results of scientific studies in supporting his major recommendations. The examples of good procedure are selected with unusual care and discrimination. He faces frankly and evaluates critically current practices and evidence relating to the major issues which teachers face today. The reader may find himself in disagreement with some of the recommendations and with the amount of emphasis given to certain phases of reading. The materials are so organized and presented, however, that they merit genuine respect and challenge constantly one's opinions or views concerning the issues under consideration. The book is admirably adapted not only to the needs of teachers and school officers in service but also for use in courses planned for prospective teachers of primary reading.

W. S. Gray

CURRENT PUBLICATIONS RECEIVED

GENERAL EDUCATIONAL METHOD, HISTORY, THEORY AND PRACTICE

ANGELL, JAMES ROWLAND. *American Education:* Addresses and Articles. New Haven, Connecticut: Yale University Press, 1937. Pp. iv+282. $3.00.

Art Education Today: An Annual Devoted to the Problems of Art Education. Sponsored by Members of the Fine Arts Staff of Teachers College, Columbia University. New York: Teachers College, Columbia University, 1937. Pp. 100. $1.15.

BAKST, AARON. *Approximate Computation.* Twelfth Yearbook of the National Council of Teachers of Mathematics. New York: Teachers College, Columbia University, 1937. Pp. xvi+288. $1.75.

BAYLISS, W. BRADFORD. *An Evaluation of a Plan for Character Education:* Involving the Use of a Pledge, an Award, and a Sponsor. Teachers College Contributions to Education, No. 695. New York: Teachers College, Columbia University, 1936. Pp. viii+142. $1.60.

BUSWELL, GUY THOMAS. *How Adults Read.* Supplementary Educational Monographs, No. 45. Chicago: Department of Education, University of Chicago, 1937. Pp. xiv+158. $1.50.

CENTER, STELLA S., and PERSONS, GLADYS L. *Teaching High-School Students To Read:* A Study of Retardation in Reading. A Publication of the National Council of Teachers of English, English Monograph No. 6. New York: D. Appleton-Century Co., Inc., 1937. Pp. xviii+168. $2.25.

COLE, WILLIAM E., and CROWE, HUGH PRICE. *Recent Trends in Rural Planning.* Sociology Series. New York: Prentice-Hall, Inc., 1937. Pp. xvi+580. $3.50.

COMMINS, W. D. *Principles of Educational Psychology.* New York: Ronald Press Co., 1937. Pp. xiv+596. $3.00.

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DOUGLASS, HARL R. *Secondary Education for Youth in Modern America.* A Report to the American Youth Commission of the American Council on Education. Washington: American Council on Educatlon, 1937. Pp. x+138. $1.00.

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The Effective General College Curriculum as Revealed by Examinations. A Report of the Committee on Educational Research of the University of Minnesota. College Problems Series. Minneapolis, Minnesota: University of Minnesota Press, 1937. Pp. xvi+428. $3.00.

GARTH, THOMAS R. *Educational Psychology.* New York: Prentice-Hall, Inc., 1937. Pp. xvi+320. $2.50.

GATES, ARTHUR I. *A List of Spelling Difficulties in 3876 Words:* Showing the "Hard Spots," Common Misspellings, Average Spelling Grade-Placement, and Comprehension Grade-Ratings of Each Word. New York: Teachers College, Columbia University, 1937. Pp. 166. $2.10.

HOBAN, CHARLES F., HOBAN, CHARLES F., JR., AND ZISMAN, SAMUEL B. *Visualizing the Curriculum.* New York: Cordon Co., 1937. Pp. viii+300. $3.50.

KIRKENDALL, LESTER A. *Factors Related to the Changes in School Adjustment of High School Pupils:* With Special Reference to Selected Factors in the Home Environment. Teachers College Contributions to Education, No. 705. New York: Teachers College, Columbia University, 1937. Pp. viii+90. $1.60.

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MANSKE, ARTHUR J. *The Reflection of Teachers' Attitudes in the Attitudes of Their Pupils.* Teachers College Contributions to Education, No. 702. New York: Teachers College, Columbia University, 1936. Pp. viii+68. $1.60.

MONROE, MARION; BACKUS, BERTIE; and PRINCIPALS, COUNSELORS, AND TEACHERS OF THE WASHINGTON, D.C., PUBLIC SCHOOLS. *Remedial Reading:* A Monograph in Character Education. Boston: Houghton Mifflin Co., 1937. Pp. xii+172. $1.40.

NEWMAN, HORATIO H., FREEMAN, FRANK N., and HOLZINGER, KARL J. *Twins:* A Study of Heredity and Environment. Chicago: University of Chicago Press, 1937. Pp. xvi+370. $4.00.

NICHOLAS, FLORENCE WILLIAMS; MAWHOOD, NELLIE CLARE; and TRILLING, MABEL B. *Art Activities:* In the Modern School. New York: Macmillan Co., 1937. Pp. xiv+380. $3.25.

OTTO, HENRY J., and HAMRIN, SHIRLEY A. *Co-curricular Activities in Elementary Schools.* New York: D. Appleton-Century Co., Inc., 1937. Pp. xiv+442. $2.75.

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PRITCHARD, MIRIAM C. *The Mechanical Ability of Subnormal Boys.* Teachers College Contributions to Education, No. 699. New York: Teachers College, Columbia University, 1937. Pp. x+74. $1.60.

REEDER, WARD G. *A First Course in Education.* New York: Macmillan Co., 1937. Pp. xvi+720. $2.75.

SMITH, MARGARET RUTH. *Student Aid:* Bases of Selection of Students to Whom Loans, Scholarships, and Fellowships Are Awarded in a Graduate School of Education. Teachers College Contributions to Education, No. 704. New York: Teachers College, Columbia University, 1937. Pp. vi+152. $1.60.

WILKINS, EUGENE G. *Public School Tax Management in Texas.* Teachers College Contributions to Education, No. 703. New York: Teachers College, Columbia University, 1937. Pp. 106. $1.60.

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BOOKS PRIMARILY FOR ELEMENTARY-SCHOOL TEACHERS AND PUPILS

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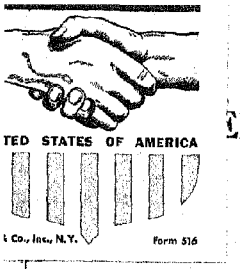

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THE ELEMENTARY SCHOOL JOURNAL

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Educational News and Editorial Comment

THE CHANGING AND THE CHANGELESS CURRICULUM

In a recent issue of *Childhood Education* there appears a stimulating editorial written by Dean B. F. Pittenger, of the School of Education, University of Texas. We quote the editorial in full.

Many persons, including not a few "educators," seem to look upon the school curriculum as a sacred institution, not to be challenged or despoiled. It might, in their way of thinking, have been handed down to Moses on the Mount or dug up out of the rock strata of geologic times. Children, teachers, housing, equipment, and other aspects of the schools may change from age to age but the curriculum—the what-to-teach-in-order-to-educate—should go on unchanged forever.

Some other people, also including "educators," seem to regard change itself, and only change, as sacred. To them, everything old is obsolete and only the new—the newer the better—is entitled to acceptance and respect. There are futurists and fundamentalists in curriculum-making as well as in the musical and graphic arts.

But most educators, like most other people, find a place in the curriculum for both the old and the new. This is the safe-and-sane group which thinks and acts between the extremes of the conservatives and the radicals. To this group nothing about the curriculum is sacred—either the old or the new. The old is conserved and respected as the tried product of experience, but it is also sub-

jected to constant scrutiny as to its continued life-values. Proposed new material is subjected to the same scrutiny for the same purposes and allowed to replace the old when its superiority is manifest. This group is responsible for keeping the curriculum alive and related to the cultural heritage of man.

It can be said with truth that the educational curriculum is both changeless and changing. Basically, it is changeless; eternally, it seeks to include experiences that will prepare each emerging human being to live happily and effectively in both his inward world of self and his outward world of surrounding circumstance. But these worlds change, and hence the curriculum, in its details of content, must change with them.

These comments emphasize the changing rather than the changeless aspects of the curriculum—changes in response to the demands of everyday living. Everyday living is life itself. The demands of everyday living are the demands of life. In responding to changes therein, the curriculum is responding to changes in human life in all its depths and fullness.

There is nothing strange nor phenomenal about this conception of life and the curriculum. It is as old as the recorded history of man and schools. In ancient Sparta, life was interpreted harshly and a hard and sullen discipline became the means and object of education. In Athens, a rich and many-sided culture found a counterpart in a richly cultural curriculum in school. Rome "legalized" its course of study and its institutions. The medieval church steeped its workers and converts in a philosophy of "other-worldliness" that became an everyday conception more real to its holders than their sense of immediate space and time. The Renaissance and Reformation ushered in new concepts of life and education which revived man's appreciation of the things of the here and now—the one for their own sakes, and the other as of parallel importance with things of the other world; indeed, as part of them.

In our own land, in its comparatively brief history, may be noted the same currency of change in both life and the curriculum. In days when and in places where religion dominated existence, it also dictated the subject matter that was taught in schools. When civic ability and virtue appeared as essential needs for a new democracy, the schools undertook honestly if somewhat awkwardly to educate for citizenship. When later, with expansion over a new continent and exploitation of its natural resources, material success became the dominant life-motive, the course of study reflected the new ideals by emphasizing vocational training and the more superficial elements of culture. Today, in the midst of chaos without, the schools exhibit evidences of a corresponding chaos within.

When one ponders at length the changes that have been thus briefly reviewed, he finds much to suggest that change in the curriculum comes not too slowly but too rapidly. Frequently the changes, while deeply motivated, seem to have been only superficially accomplished. Seldom if ever, it would seem, have the determiners of the curriculum dug down, in either the inward or the outward worlds of life, to the verities that are eternal. Here, perhaps, is an invitation to the making of a basic and lasting change.

In the main, it would seem, human life changes not fundamentally, but rather in those details of existence and adjustment which really constitute a change of clothes. But the man is still the same after he has doffed and donned a change of garments. Our curriculums are, and always have been, clothes-conscious. Their changes to fit new circumstances and conditions are naturally inescapable, but these changes are frequently too all-pervasive because at bottom the curriculum has never been properly founded on the changeless qualities and character of man himself.

When education is at last able to divert its major efforts away from the superficial necessities of adjustment to environment to the basic necessities of character development, there will appear a curriculum which, like the life that it represents, will be changeless in the midst of change.

Dean Pittenger's caution against ephemeral curriculums is altogether timely. In many teachers' colleges and schools of education there is a tendency to multiply courses so that a course may be provided dealing with almost every specific problem with which teachers will be confronted. A similar tendency is noted in high-school curriculums; not infrequently they spread out fanwise to include specific activities of the greatest variety. Curriculum-makers in many quarters seem almost to have lost sight of the principle of generalization. Yet there is a danger of swinging to the other extreme. We are fearful of a curriculum which is based primarily on "verities that are eternal," which, "like the life that it represents, will be changeless in the midst of change." It is true that education has a center of interest quite apart from the current of contemporary social and political change, that in a very special sense it is the guardian of those accumulations of ideas, knowledge, skills, values, and attitudes which constitute what Beard has called "the funded capital of experience." It is equally true, however, that the school serves as a means of securing political and social cohesion and of giving direction to the processes of social change. Quite without regard to time or place, the school has always been used as a means of socializing youth in terms of the purposes and objectives of the control groups in society, in terms of the prevailing value pattern. However much education may be a hostage to the past, it finds its center of interest in the civilization of which it is a part; it always operates within the purposes and ideals of the existing social order. The school, while preserving tradition and contributing to the stability of the existing

pattern of social arrangements, also plays an important role in the processes of social transition. Social forces, playing on the school from without—forces over which educators themselves have little or no control—in large measure determine the school's philosophy, define its social obligations, prescribe the content of its curriculum, and fashion the form of its structural organization. There is a ceaseless flow of consequence between society and school, and there is a corresponding flow of consequence between school and society. In the long run and always, the curriculum is the product of this flow and counterflow. The curriculum serves as an instrument of preserving and conserving the accomplishments of civilization; in fulfilling this purpose, it is more or less removed from the conflict and the turmoil of contemporary social change. It also serves as an instrument of critical social analysis and of social direction; in accomplishing this end, it always comes to grips with the realities of a changing present.

Social Implications of Technological Trends

The swift movement of social change which characterizes American life today is caused very largely by inventions. Invention is the great disturber of the ways of men; it changes first the physical world in which we live, and later it changes the whole pattern of our social arrangements. The impact of technology on our economy has broken most of the old institutional molds and is forcing a reconstruction of institutional forms. In the whole area of social relations, whether of government, economy, education, or ethics, we are faced with the necessity of adaptation and adjustment. The educational institutions of this country will fail signally unless teachers are brought to a deeper appreciation of the social importance of technological change.

In a recently published report entitled *Technological Trends and National Policy*, the National Resources Committee presents a searching analysis of the importance of technology in the national life. The three parts are devoted, respectively, to the following general topics: "Social Aspects of Technology," "Science and Technology," and "Technology in Various Fields." In the Foreword

Harold L. Ickes, Secretary of the Department of the Interior, says of the report:

This document is the first major attempt to show the kinds of new inventions which may affect living and working conditions in America in the next ten to twenty-five years. It indicates some of the problems which the adoption and use of these inventions will inevitably bring in their train. It emphasizes the importance of national efforts to bring about prompt adjustment to these changing situations, with the least possible social suffering and loss, and sketches some of the lines of national policy directed to this end.

The major findings of the committee are of such significance that we quote them in full.

1. The large number of inventions made every year shows no tendency to diminish. On the contrary the trend is toward further increases. No cessation of social changes due to invention is to be expected. It is customary to speak of the present age as one of great change, as though it were a turbulent transition period between two plateaus of calm, but such a conclusion is illusory. Though the rate of change may vary in the future there is no evidence whatever of a changeless peace ahead.

2. Although technological unemployment is one of the most tragic effects of the sudden adoption of many new inventions (which may be likened to an immigration of iron men), inventions create jobs as well as take them away. While some technological changes have resulted in the complete elimination of occupations and even entire industries, the same or other changes have called into being new occupations, services, and industries.

3. No satisfactory measures of the volume of technological unemployment have as yet been developed, but at least part of the price for this constant change in the employment requirements of industry is paid by labor since many of the new machines and techniques result in "occupational obsolescence." The growth and decay of industries and occupations caused by technological progress necessitate continuous and widespread—and not always successful—readjustments and adaptations on the part of workers whose jobs are affected by these changes.

4. The question whether there will be a large amount of unemployment during the next period of business prosperity rests only in part on the introduction of new inventions and more efficient industrial techniques. The other important elements are changes in the composition of the country's production (such as appreciable changes in the proportion which service activities constitute of the total), the growth of population, changes in the demands for goods and services, shift in markets, migration of industry, hiring age policies of industries, and other factors discussed in the body of the report. For instance, even if industrial techniques remained the same, the volume of production would have to be greater in the future than in 1929 in order to absorb the increase in the working

population and keep unemployment to the level of that date. If the productivity of 1935 (the latest year for which figures are available) continues the same in 1937, and the composition of the nation's total product remains unchanged, production would have to be increased 20 per cent over that of 1929 to have as little unemployment as existed then. Failing this there will be more unemployment and if labor efficiency is increased by new inventions or otherwise, then the production of physical goods and services must be more than 120 per cent of what it was in 1929.

5. Aside from jobs, subtracted or added, new inventions affect all the great social institutions; family, church, local community, state, and industry. The committee finds that in all the fields of technology and applied science which were investigated there are many new inventions that will have important influences upon society and hence upon all planning problems. Particularly impressive were new inventions in agriculture, communication, aviation, metallurgy, chemistry, and electrical tools and appliances.

6. A large and increasing part of industrial development and of the correlated technological advances arises out of science and research. Invention is commonly an intermediate step between science and technological application, but this does not make less important the point that the basic ideas upon which these programs are developed come out of scientific discovery or creative activity.

7. Advance of many aspects of industry and the correlated technologies is dependent upon scientific research and discovery. This fact is made clear by the increasing importance of research laboratories in the great industries. The research conducted is not only well organized but it is carried forward with the co-operation of investigators having high rank in the field of science. If the contribution of research were to be reduced, the industries would tend to freeze in a particular pattern.

8. Though the influence of invention may be so great as to be immeasurable, as in the case of gunpowder or the printing press, there is usually opportunity to anticipate its impact upon society *since it never comes instantaneously without signals*. For invention is a process and there are faint beginnings, development, diffusion, and social influences, occurring in sequence, all of which require time. From the early origins of an invention to its social effects the time interval averages about thirty years.

9. While a serious obstacle to considering invention in planning is lack of precise knowledge, this is not irremediable nor the most difficult fact to overcome. Other equally serious obstacles are inertia of peoples, prejudice, lack of unity of purpose, and the difficulties of concerted action.

10. Among the resistances to the adoption of new inventions and hence to the spread of the advantages of technological progress there is specially noted those resistances arising in connection with scrapping equipment in order to instal the new. Better accounting methods and greater appreciation of the rate of inventional development facilitates the spread of improved capital goods.

The rate of capital obsolescence is especially a major problem under monopolistic conditions, which probably favor the adoption of technological improvements less than do conditions of keen competition.

11. The time lag between the first development and the full use of an invention is often a period of grave social and economic maladjustment, as, for example, the delay in the adoption of workmen's compensation and the institution of "safety first" campaigns after the introduction of rapidly moving steel machines. This lag emphasized the necessity of planning in regard to inventions.

This report should be of interest to teachers everywhere. It may be secured from the Superintendent of Documents, Washington, D.C. The price is one dollar.

Trends in School Costs

The following statement is quoted from a recent pamphlet of the United States Office of Education entitled *Per Capita Costs in City Schools, 1935–36*.

Since 1933 there has been a continuous upward trend in expenditures for education in the approximately 300 city public-school systems included in the per capita costs study each year. During the past six years, the average cost reached its lowest level in 1933 when it was $87.65 per pupil in average daily attendance. In 1934 this cost increased to $94.05 or a gain of 7.3 per cent when compared with 1933; in 1935, it reached $96.18, or an increase of 2.3 per cent over 1934; while in 1936, the average cost was $102.73, or an increase of 6.8 per cent over like cost in 1935. In 1933 only 11 cities, or less than 4 per cent of the cities studied, showed increased costs over 1932; in 1934, 55 cities, or more than 20 per cent, reported higher costs than in 1933; in 1935, 195 cities, or more than 70 per cent, showed higher costs than in 1934; while in 1936, 185 cities, or more than 86 per cent expended more per pupil than in 1935. Although the increase in pupil cost from 1933 to 1936 was 17.2 per cent, yet in 1936 it was 5.6 per cent less than like cost in 1930, and 9.1 per cent less than like cost in 1932.

Here and There among the Schools

An educational clinic in Pittsburgh.—From Ben G. Graham, superintendent of schools of Pittsburgh, we have received the following statement with regard to the educational clinic established in Pittsburgh last year.

An educational clinic was organized during the year to serve the needs of children who are failing to adjust in school. The clinic has met every Friday for examinations of children by persons trained in various phases and aspects of

child guidance. A multiple approach was made to each child's problem, through a study of his physical, intellectual, emotional, social, and educational needs.

Since inability to read is one of the most frequent types of school failure, and one which has a particularly vital influence on later school progress and behavior, the clinic addressed its efforts during the first year primarily to the study of reading disabilities. In the future other types of difficulties will also be considered in the clinic.

The general aims of the clinic are: (1) to provide a diagnostic center to which children having various types of educational problems may be referred; (2) to combine physical, psychological, social, and educational data for a better understanding of the whole child as he reacts to his environment; (3) to utilize modern principles of mental hygiene in an approach to educational problems; (4) to acquaint principals and teachers with diagnostic and remedial procedures through clinic staff meetings; (5) to make helpful suggestions for the solution, so far as possible, of each child's problem in the light of the clinic findings; (6) to evaluate by follow-up studies the methods used and the results of treatment.

A more detailed account of procedures employed in the clinic will appear in the annual report of the superintendent for 1936–37.

A method of keeping the public informed about the ideals and operation of its schools.—Superintendent H. H. Kirk, of Fargo, North Dakota, has adopted the practice of sending to parents, with the report cards issued each six weeks, a small four-page pamphlet. The first page contains a short but well-worded message from the superintendent on some aspect of the schools' objectives or on some specific phase of the schools' work. The two inner pages usually contain a brief factual statement about such matters as school costs, the kinds of schools in the city, or school enrolment. The last page contains the names of the members of the Board of Education and an apt quotation from some writer of note. The booklet is printed by the senior high school printing class.

Administration and supervision based on carefully planned programs of committee study.—M. E. Coleman, assistant superintendent of schools of Atlanta, Georgia, has supplied us with an account of the work being done there by committees of elementary-school principals in planning educational policies and procedures. The purpose of the plan is to develop "a type of administration and supervision in the elementary schools based on a carefully planned program of committee study during the year." The committees are composed of elementary-school principals. No teachers have been placed on any

committee, but it is intended that each principal will confer with the teachers in her school and will in fact make them, or as many of them as she deems advisable, associate members with her on the committee. During 1936–37 there were sixteen committees at work. Some of the problems under consideration were as follows: the principal as administrator, the principal as supervisor, the curriculum, pupil progress, textbooks, selection and training of teachers, principals' meetings, school and community relations, and economy of school time. At some time during the year each committee submits a formal report.

The following communication, addressed by Mr. Coleman to the Committee on the Principal as Administrator, is typical of the communications addressed to the various committees and illustrates the fundamental approach that is being made to the problems of administration and supervision.

It is becoming more and more apparent that the principal must assume a large share in the administration of our schools and to that extent should be an integral part of the superintendent's staff. The principal is the connecting link between the superintendent and the teachers; the teachers and the parents; the superintendent and the parents; the schools and the community. This in addition to the extent to which the principal must serve as agent of the superintendent in carrying out the policies, rules, and regulations of the board of education.

The problem of this committee is one of major importance. We hope that the committee will be able to do three things:

First, help strengthen the position of the principal in the minds of the principals themselves, as well as others, as to the place of the principal in these major factors of school life.

Second, study these problems with an idea of making suggestions as to how these functions may be performed. How, for example, can a principal best relate her teachers to her parents and the community as well as to the central office?

Third, what practical adjustments must be made in order to enable the principal, first, to train herself the better to do this work; second, that she may have the time in which to do it?

Improving the administrative organization in New Rochelle, New York.—Under the editorial caption, "A Managing Superintendent," a recent issue of the New Rochelle *Standard-Star* describes the program of administrative reorganization which the new superintendent, Herold C. Hunt, is attempting to carry into effect. The basic

principles underlying the proposed plan of organization are described as follows:

A board of education should:

1. Systematize its business, give to its executive staff full responsibility for executive detail, and devote itself only to oversight and direction of all that is done.

2. Make the superintendent the executive officer of the board, give him full power and responsibility, and hold him strictly accountable for the successful conduct of all departments of the system.

3. Define, with the superintendent's aid, the functions of every person attached to the district.

4. Recognize that its duty is to see that the schools are properly managed and not manage them itself.

In accordance with these general principles, Superintendent Hunt is recommending that standing committees be abolished and that the status of a number of "line" officers be redefined. The *Standard-Star* comments on the proposal as follows:

It is gratifying that the board has shown a proper response to Mr. Hunt's straightforward manner of grasping a new situation and determining that he is going to do the job he was hired to do, credit or blame fall as it may.

The board has under consideration now the revision of its bylaws, and, in what might be called a test vote Tuesday night, the seven members attending the meeting were unanimous in their opinion that the special committee . . . . should continue its study of bylaw revision on the basis of eliminating the standing committees. . . . .

Abolition of the standing committees is a step that clears the way for Mr. Hunt to operate as he desires to conduct the school system.

The Board of Education is to be congratulated on its attitude in giving the new superintendent full authority and placing in him full responsibility. It has exhibited keen wisdom in its decision on this question—just as it displayed excellent judgment in its choice of a man to fill the superintendent's position, a conclusion that the events of one month have already proved.

Guidance in the development of units of work.—The first number of the University Elementary School Curriculum Reports, published by the Bureau of Educational Reference and Research of the University of Michigan, is entitled *Station TGR: A Radio Unit Developed in the Third Grade.* The pamphlet contains a clear, detailed, and well-written account of the development of the unit. Teachers interested in developing activity units will find these curriculum reports particularly valuable. They are prepared under the auspices of the Cur-

riculum Committee of the University Elementary School, with Professor Willard C. Olson, director of research in child development, serving as consultant. In the Foreword the committee comments as follows on the type of unit that seems most desirable:

It is the feeling of staff members that the most satisfactory unit of work is one that grows out of the experience of children, develops, reaches a satisfying conclusion, and is not necessarily repeated again by other children. It is recognized, of course, that this ideal is only partially realized in practice. It is the hope of the committee that the increasing availability of accounts of the type here presented will encourage teachers to test the possibilities of similar attempts in their own programs.

A social-science course based on our heritage from modern nations.—In Grades IV and V of the schools of Ironwood, Michigan, a course in the contributions of modern nations to civilization, and especially to American civilization, has been substituted for the traditional type of course in American history. We are indebted to Inez B. Petersen, supervisor of the elementary schools, for the following account of the content and purposes of the course.

Ironwood has eliminated, in the social-science course for Grades IV and V, most of the subject matter now found in many courses of study and has substituted other material of social, cultural, recreatory, and historical value which might be classified under one head as "Our Heritage from Modern Nations." This study includes education, brief history, literary productions, institutions, art, music, geography, and characteristics of people and their modes of living, such as food, shelter, clothing, play, and recreation. For instance, the relations of climatic conditions, natural resources, and location to life in various countries are observed. Hence, we do not live as the Laplanders because of certain geographical factors over which we have little or no control. If, however, we were suddenly transported to a colder or a warmer climate, we too would change many of our habits and customs. Throughout this phase of the curriculum a comparison with these nations and our own nation is made. Similarities and contrasts are emphasized. Contributions that have helped in the development of culture, science, government, art, or some other phase of civilization are observed as far as possible. Thus a knowledge of these nations will not only help us to understand foreign peoples, but it will also give us a better knowledge of our country. It should also broaden pupils' horizons.

American history is not discarded, but much material has been eliminated. Chief concern is given to Colonial life, southern plantation life, present living, education, inventions, discoveries, music, art, personalities, and national progress. The chief purpose throughout is to develop a tolerant and an enlightened citizenry through a genuine understanding and an appreciation of the worth-

while things which have been our inheritance and which, it is hoped, will make the boys and girls honest, open-minded, loyal, sincere, unbiased, happy, and intelligent participants in the affairs of their own great nation.

A Program of Research on the Effects of the Depression on Education

The Social Science Research Council is sponsoring the publication of a series of thirteen memoranda which will serve as guides to the study of the social aspects of the depression. These monographs will deal with the effects of the depression on crime, education, the family, internal migration, minority peoples, recreation, religion, rural life, consumption, health, reading habits, relief, and social work. Although the essential purpose of these memoranda is to outline a research program, they will, nevertheless, contain much information on the social consequences of the depression.

The *Research Memorandum on Education in the Depression* (Bulletin 28 of the Social Science Research Council), prepared by the Educational Policies Commission, with the assistance of Professor Jesse B. Sears, of Stanford University, has recently been published. The following quotation indicates the general purpose and scope of the volume.

> The effects of the depression most of concern are reflected both in the changes produced in education and in what the people or the schools did about it. Through proposed researches, the purpose here will be to try to bring to light any serious problems that have been left to education by this disturbance. Some of these are studies that take stock of changes, good or bad; others of evaluating what was done, or the consequences of neglect; and last, but certainly not least, of how to attack problems yet unsolved.
>
> In such a large field for a review of this kind, many possibilities were open. The one chosen applies the logic most in use in the study of education, in writings within the field, and in the practical organization of educational service. The general topics for the eight chapters embodying the problems proposed for research are: historical and comparative problems, theory and philosophy of education, student personnel, the curriculum or program of instruction, staff personnel, organization and administration, finance and business management, scientific and professional activities.
>
> The problems presented were systematically gathered over a period of some weeks, during which time literature in this field was reviewed, conferences were held with authors of other monographs of this series in order to delimit the field, and correspondence was held with a few recognized experts interested in this problem.

From the standpoint of research, the literature comprised in the bibliography of some 1,600 titles, soon to be published by the Educational Policies Commission, was a bit disappointing. It does embody evidence of substantial activity within the profession concerning depression effects on the schools. It reflects what was done to the schools and to education in a broader sense. It not only reveals what the people and the schools were doing about their difficulties, but also much speculation as to cause and cure. Of careful research, however, it shows a very small amount. Consequently many problems have been presented in this monograph primarily as questions and have not been developed in the more extended form. Enough of them are stated as formal hypotheses so the readers will not be misled by the brief and informal setting in which some of the others appear.

In presenting the problems two groups of readers have been kept in mind, viz., advanced students and professional research workers, in the social sciences generally and in education in particular. Because education is an applied social science, there is little conflict of interest and certainly very much in common between these two groups of research workers, though at present each of them is too little acquainted with what the other is doing.

No attempt has been made to make this a treatise on education, and certainly none to make it a treatise on the social sciences. Also, it is not a systematic review of the effects of the depression on education. It proposes plans for researches that are required as a foundation for a treatise on this latter subject. In preparing these plans, and to avoid making a dull catalogue of questions, effort has been made to give the questions some educational setting. All questions are not of equal importance; some, quite easy to ask, are impossible to answer satisfactorily. Views on education are offered here only as a basis for making clear some problem or group of problems.

Nor is this a treatise on research method. It does, however, provide some assistance in making an approach to the problems. To this end, effort has been made, not only to give the issues adequate interpretation from the educational and social viewpoint, but to present sample hypotheses set up for research attack, with some directions as to methods and sources. It has not been the purpose to do all the things required but only enough to suggest a mode of attack. These problems offer a wide sampling of the field, of the sources to be drawn upon, and of research techniques. In all cases, however, they were selected because they were regarded as important problems.

A companion pamphlet, issued by the Educational Policies Commission, is entitled *A Bibliography on Education in the Depression.* The major divisions in the bibliography correspond to the chapter headings in the monograph. The bibliography contains some 1,600 titles.

Publications of Interest to Teachers of Young Children

The Association for Childhood Education has recently published a number of bulletins which should prove particularly helpful to teachers in the lower grades. Each of the publications was compiled or written by well-known teachers in the field of early childhood education. The titles are as follows: *Foundations in Arithmetic*, *The Modern Kindergarten*, *Equipment and Supplies*, *Bibliography of Books for Young Children*, and *The Kindergarten Centennial, 1837–1937*.

We quote from a release of the association:

> This new educational bulletin [*Foundations in Arithmetic*] of the Association for Childhood Education explains the real place of arithmetic in the primary school and analyzes today's trends in its teaching; suggests the number concepts and meanings we may expect young children to have and how they can be developed more effectively; explains of what beginning number should consist and the foundations necessary in problem-solving.
>
> In addition, there are illustrative lessons from first-, second-, and third-grade classes in arithmetic, with outlines of the backgrounds, methods of development, and results to be expected from their use.

This bulletin was compiled by Ada Polkinghorne, University Elementary School, University of Chicago, and it was edited by Clifford Woody, University of Michigan; F. B. Knight, University of Iowa; and Edwina Deans, Public Schools, Greensboro, North Carolina. Among the contributors are Harry O. Gillet, University of Chicago; R. L. Morton, University of Ohio; W. A. Brownell, Duke University; E. L. McDonnel, and Helen Laurie, Seattle Public Schools; and six teachers in the University Elementary School, University of Chicago. We cite the authors of this bulletin as an illustration of the high quality of authorship of the entire series.

The following statement is quoted from the release describing the bulletin dealing with *Equipment and Supplies*.

> How to select wisely the equipment and supplies to be used in schools for young children often is a perplexing problem. Definite, dependable information frequently is lacking as to the quality of the material and its actual value in the schoolroom.
>
> As a helpful solution of this problem, during the past two years test centers were established in various sections of the country by a committee of the

Association for Childhood Education, and manufacturers were invited to send materials to these centers for examination and testing. Each article received was placed in actual classroom use, and the results carefully recorded.

The new issue of *Equipment and Supplies* is the outcome of this painstaking work. It contains complete, detailed lists of suggested equipment and supplies for nursery schools, kindergartens, and primary grades of given numbers of children; alphabetical lists of various items, grouped under such headings as "Apparatus," "Art Supplies," "Building Blocks," and so on, describing the items and giving names of manufacturers or distributors, and the age levels for which suitable. There is also a short bibliography of reference material and an alphabetical list of manufacturers with their addresses.

Who's Who in This Issue

Charles A. Smith, district superintendent of schools, Rosemead Elementary District, Rosemead, California. Joseph H. Collins, principal of the Northeast Junior High School, Kansas City, Kansas. Harl R. Douglass, professor of secondary education at the University of Minnesota. Grace C. Schaeffer, supervisor of Grade IV at the Eastern State Normal School, Madison, South Dakota. Albert Grant, statistician at the Psychological Laboratory of the Public Schools, Cincinnati, Ohio. J. C. Seegers, professor of elementary education at Temple University. Alice Price, graduate student at Temple University. William S. Gray, professor of education at the University of Chicago. R. L. Lyman, professor of the teaching of English at the University of Chicago. Frederick S. Breed, associate professor of education at the University of Chicago. Frank N. Freeman, professor of educational psychology at the University of Chicago. R. M. Tryon, professor of the teaching of history at the University of Chicago. Edith P. Parker, assistant professor of the teaching of geography at the University of Chicago.

THE EXPERIENCE METHOD IN BEGINNING READING

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QUESTIONS RAISED BY THE CURRENT-EXPERIENCE METHOD

In the light of current progressive practices using nonreading programs in Grade I, those who would like to withhold judgment must inquire what pre-reading experience, what vocabulary training a child learning to read should have. Stone[1] points out that "there is abundant evidence in research studies today to indicate that the current methods of teaching beginning reading are producing nonreaders and seriously retarded readers in such numbers as to cause real concern." Current methods of teaching reading, of course, are not unmixed with traditional methods. "Incidental" and "natural" methods of teaching reading are thought to contribute to "memory reading" as an inevitable result, according to Stone's appraisal of the current-experience method. Stone maintains that under this method systematic repetition of a minimum basic vocabulary in meaningful reading will be insufficient to result in word-learning and that some teachers attempt to offset this weakness by having children match words and phrases in the unit chart, "following the technique of the nursery-rhyme and folk-tale method." He then goes on to point out that the current-experience method is too involved for any except those six-year-old children "who readily learn to read under any method or with no method"—those who are ready for reading.

In an impressive investigation Lee[2] found that the activity program resulted in lower grade placement for all types of pupils on the Primer Test and the First Reader Test of the Lee-Clark Reading

[1] Clarence R. Stone, "The Current-Experience Method in Beginning Reading," *Elementary School Journal*, XXXVI (October, 1935), 105–9.

[2] J. Murray Lee, "Reading Achievement in First-Grade Activity Programs," *Elementary School Journal*, XXXIII (February, 1933), 447–51.

Tests. As Lee points out, one weakness of his study is that the teachers rated *themselves* with respect to the amount of "activity" which they employed in their teaching. It is possible that teachers who were not "activity-minded" would tend to rate themselves as doing a great deal of activity teaching if they did any at all and that teachers who believed heartily in activity teaching would rate themselves as doing a little when they might be doing more than the other group. In the degree to which this tendency is true, Lee's findings can be interpreted in the reverse from his conclusions. If all the conditions are accepted, the evidence given by Lee justifies his conclusions. However, if total unreliability of the teachers' self-ratings be assumed, the activity protagonist might point to the significance of the gain which was made under the activity program. However, Lee's conclusions support Stone's contention that the experience method is producing nonreaders in alarming numbers. If the method produces median grade placements which are lower by from one to seven months than the placements under less activity, it would seem that nonreaders would be more numerous under the current-experience method.

The experience method thus raises two questions: (1) When shall the child be started in actual reading? (2) From the standpoint of drill itself and of the application of the laws of learning, what merit is there in the experience method?

As long as the protagonists of the experience method assume that the necessary experiences are equally possible to all children of six years of age, they will suffer the same reverses in securing reading ability that the earlier drill methods suffered—and for the same reason. It is no more possible for the immature child to get "meaningful" concepts in relation to reading than it is for him to "learn" words. If the child is too immature for "meaningful experience" in reading, mere activity will not produce results.

It is not the purpose of this article to discuss reading readiness except as readiness is a part of the general problem of the experience method. In 1898 Dewey gave a good summarization of the basic philosophy.[1] A more complete discussion of the scientific factors of

[1] John Dewey, "The Primary-Education Fetich," *Forum*, XXV (May, 1898), 315–28.

the problem is given by the present writer and Miss Jensen in an article bearing directly on this problem.[1] It would seem that a delay until the child has reached a mental age of six and one-half years would be justifiable. Such a delay would give some assurance that other factors involved would have reached a maturity level commensurate with the difficulties encountered. It also seems safe to say that, if the experience method is applied without due regard to maturation, that method too will meet with a high degree of failure. While the amoeba can be stimulated by the prick of a pin, the reaction patterns do not take the form of walking away or of emotional antagonism. Thus, with the child in reading: methodical drill may produce measurable results, but it is doubtful whether, over a long period of time, it will produce the inquisitive and the insatiable reader with nervous integrity. The hope of the protagonists of the experience method is that this program will produce such readers.

COMPARISON OF READING PROGRAMS USING VARYING AMOUNTS OF ACTIVITY

State departments and teacher-training schools have already made their impressions on many teachers. However, there is still a dearth of statistical evidence to show whether postponement of reading increases or decreases the number of nonreaders or whether the activity program provides an enriching experience in vocabulary which is of more ultimate value than is the drill method in reading. In the study which is reported in this article, an attempt is made to add to the growing amount of evidence which is necessary to the final solution of the problem. The weakness of this study is similar to that reported by Lee. However, in this case the judgments on the degree of activity employed by the teachers were made by the supervisors. Whether this fact is a greater or lesser defect will be adjudged by the reader on the basis of his experience in school and his attitude toward the problem.

At the beginning of the third month of the school term of 1935–36, when the various classroom activities were well under way, stenographic records were made of all that took place during a single day

[1] Charles A. Smith and Myrtle R. Jensen, "Educational, Psychological, and Physiological Factors in Reading Readiness," *Elementary School Journal*, XXXVI (April and May, 1936), 583–94, 682–91.

in six classrooms in Ventura, California. The stenographers made complete records of every word which was used by pupils and teachers in the class situation. Every word used on charts, mimeographed sheets, blackboards, or in books to which the children were exposed was recorded for all first-grade rooms. One record was made of written words and another of the spoken words which were used in explanation or by way of comment. All the words having direct relation to the reading work were classified against Thorndike's word list.[1] It is recognized that a frequency evaluation of words is not the best method for selecting the words to be used by first-grade children, but it is also recognized that the Thorndike list has been a potent factor in the building of the vocabularies of the textbooks in reading now on the market and in the building of what teachers recognize as a child's vocabulary. This list therefore makes a good measuring stick against which the experience method may be checked in comparison with the drill method. In this checking, the word list on which the drill methods are based was used, and the procedure was therefore not unfair to the older methods.

The results of the November count are shown in Table 1. From this table it is seen that there was a tendency for the activity teacher to use more reading-exercise or reading-drill words in her activities than the formal teacher used in her drill. The activity teacher also tended to use more of the words in the first five hundred of the Thorndike list. This finding has a direct application to Stone's suggestion that the experience method provides insufficient systematic repetition of a minimum basic vocabulary. If Teacher 1, who used no books at all and did much work with experiential activities based on the children's interests, is compared with Teacher 6, who was most formal in the sense of doing much drill work, it is evident that the former gave more exposure to words in every classification. In this table are represented those words which were used in written work. These words were checked against those used orally, and every written word was also used orally. Only those words which were used in the teaching relation are represented; that is, words

[1] Edward L. Thorndike, *A Teacher's Word Book of the Twenty Thousand Words Found Most Frequently and Widely in General Reading for Children and Young People.* New York: Teachers College, Columbia University, 1931.

used to give directions for class movement or to assist in individual child problems were not listed. Teacher 5 gave the children almost as many word exposures in the minimum essential list as did either Teacher 1 or 2, the differences being insignificant. A checkup count on the three teachers showed the same relation. Teacher 5 was an experienced teacher; Teacher 1 was practically inexperienced. This fact may account for the latter's use of a larger number of words

TABLE 1

DISTRIBUTION, ACCORDING TO PLACEMENT IN THORNDIKE LIST, OF WRITTEN WORDS USED IN ONE DAY'S WORK IN NOVEMBER, 1935, IN THE READING PROGRAM IN CLASSROOMS OF SIX FIRST-GRADE TEACHERS RATED ON AMOUNT OF ACTIVITY USED

Teacher	Frequency of Use of Words According to Placement in Thorndike's Word List									
	First Hundred	Second Hundred	Third Hundred	Fourth Hundred	Fifth Hundred	Second Half of First Thousand	First Half of Second Thousand	Second Half of Second Thousand	First Half of Third Thousand	Total
1. (No basic books, much activity)	290	51	29	27	17	43	38	38	13	546
2. (No basic books, work based on children's interests)	234	82	55	26	30	54	22	11	6	520
3. (No basic books, work based on children's interests)	238	37	16	29	21	25	18	7	7	398
4. (Some basic books, work based on children's interests)	179	22	16	19	15	23	16	14	1	305
5. (Work based largely on book materials)	276	66	70	21	17	36	16	5	4	511
6. (Work based solely on book materials)	160	39	19	7	4	16	.....	4	.....	249

from the higher sections of the Thorndike list. The checkup count disclosed the same tendency. However, since all except Teacher 1 were experienced teachers, the conclusions may be justified that it is the method which creates the demand for more word usage in meaningful situations and that, if Teacher 1 had been forced to follow the drill method, she would have scored lower in the number of word presentations to the children.

However, when a whole school system is compared or when two methods or philosophies are compared, what a given teacher might have done with another method is not pertinent. If the drill method succeeds, on the whole, in teaching more words in the beginning

years of training, it is superior in one respect. If the child learns the words permanently after about twenty-five exposures and if the experience method succeeds in giving these exposures quicker than the traditional method, it is fair to assume that the experience method is superior on the basis of the number of words learned. Table 2 shows that the activity teachers succeeded not only in pre-

TABLE 2

NUMBER OF PRESENTATIONS IN ONE DAY'S WORK GIVEN WORDS FROM FIRST HUNDRED OF THORNDIKE LIST BY SIX FIRST-GRADE TEACHERS RATED ON AMOUNT OF ACTIVITY USED

Teacher	Number of Different Words Presented	Number of Words Presented						Total Number of Repetitions
		30–39 Times	20–29 Times	10–19 Times	5–9 Times	2–4 Times	Once	
1. (No basic books, much activity)	34	.....	1	5	14	12	2	32
2. (No basic books, work based on children's interests)	40	.....	3	3	12	18	4	36
3. (No basic books, work based on children's interests)	32	.....	4	2	9	10	7	25
4. (Some basic books, work based on children's interests)	42	.....	1	4	7	11	19	23
5. (Work based largely on book materials)	43	1	3	4	7	14	14	29
6. (Work based solely on book materials)	41	.....	.....	3	10	15	13	28

senting as many words but also in repeating as many of the words presented as did the teacher using the drill method. Since the words which are repeated in the activity method are repeated not as drill but in vital relation to the reading materials and to the child's needs, it may be assumed that the repetitions are more intense and therefore more effective. The activity protagonists would claim that, since the repetitions occurred with the complete co-operation of the child, there would be few, if any, occasions to stimulate nervous disintegration in the child and that this situation would tend toward more effective learning. Whether this assumption is correct

may be determined only after many more recordings and follow-up tests.

Table 3 shows the results of a similar stenographic record made in June, 1936. It will be seen that there was little difference among the teachers with respect to the number of words presented. By the time children have gained some facility in the recognition of words and are allowed to use books, the variations shown in Table 3 could arise

TABLE 3

DISTRIBUTION, ACCORDING TO PLACEMENT IN THORNDIKE LIST, OF WRITTEN WORDS USED IN ONE DAY'S WORK IN JUNE, 1936, IN THE READING PROGRAM IN CLASSROOMS OF SIX FIRST-GRADE TEACHERS RATED ON AMOUNT OF ACTIVITY USED

Teacher	Frequency of Use of Words According to Placement in Thorndike's Word List									
	First Hundred	Second Hundred	Third Hundred	Fourth Hundred	Fifth Hundred	Second Half of First Thousand	First Half of Second Thousand	Second Half of Second Thousand	First Half of Third Thousand	Total
1. (No basic books, much activity)	332	93	60	71	72	44	63	39	22	796
2. (No basic books, work based on children's interests)	318	101	52	27	35	66	41	29	31	700
3. (No basic books, work based on children's interests)	301	90	72	53	41	60	49	33	26	725
4. (Some basic books, work based on children's interests)	246	67	48	29	27	39	42	34	21	553
5. (Work based largely on book materials)	322	105	91	52	40	46	37	41	27	761
6. (Work based solely on book materials)	327	73	41	19	24	34	21	28	32	599

from differences in the books that they happen to be using at the time. However, some of the difference is due to the fact that the experience method uses experiential activities in addition to the book exercises. The evident influence of books reflected here elicits the observation that the concern over the efficacy of a given method used by teachers is needless. After all, the differences in teachers' methods are ironed out to a degree by the common textbooks which are used, and in vocabulary usage the first-grade books do not permit a great deal of variation. Furthermore, a method is controlled somewhat by the attitude of a community. An activity-minded teacher, in order to protect her position, may be forced to a formal

program by the community attitude. Such is the price of democracy. In 1898 Dewey advocated the experience method in the teaching of reading, writing, and arithmetic, but in 1937 a community in California resists scientific findings with respect to these same subjects. Since the resistance includes writing and arithmetic, as well as other fundamental subjects, there is little need to worry whether the experience method in reading will produce enough drill. The community attitude will always be adequate guaranty that the schools will not move faster toward this program than is justified by the development of reliable techniques and measurements and by the production of evidence to warrant permanent change. However, if there is any difference in the amount of word drill given by the two methods, it seems to favor the experience method. Advocates of the drill method would counter with the statement that there is little value in mere repetition. Unless the repetitions are conscious repetitions, there is little chance that learning will take place.

In an attempt to discover any differences which might have occurred during the year with respect to the total reading achievements, a careful check was made on a number of items. Table 4 shows the results of the check. The evidence is far from conclusive. It would be conceded that the teachers ranked as activity or experience-method teachers, except Teacher 2, stand at the top with respect to the number of books read. Since much reading was done in these classes which was not done from books, it would seem that these children actually read even more. However, there were other contributing factors. The classes reporting the reading of fewer books included children coming from the sections of the city largely made up of working people, while those reporting the reading of greater numbers came from the part of the city in which are located the homes of professional and business men. This contrast is true without exception. The class of Teacher 2 was made up chiefly of pupils from the Spanish and Mexican section of the city, and many of these children could not speak English when they entered school. In view of this fact the record of this class is especially surprising. In the matter of the number of words learned, the test disclosed that one pupil under Teacher 5 learned 639 words. The average for this class was not significantly different from the other averages. With

the exception of the class of Teacher 2, in which special difficulties in learning the language were encountered, the number of words learned by the various classes was relatively uniform.

Factors which vitiate the value of the results of this study and which are not subject to control in so small a study are problems of home background, accurate pairing of intelligence quotients, and

TABLE 4

NUMBER OF BOOKS READ AND NUMBER OF WORDS LEARNED BY FIRST-GRADE CHILDREN TAUGHT BY SIX TEACHERS RATED ACCORDING TO AMOUNT OF ACTIVITY USED

Teacher	Number of Books Read			Number of Words Learned		
	Class Range	Class Average	Average with Non-readers Eliminated	Class Range	Class Average	Average with Non-readers Eliminated
1. (No basic books, much activity)	5–24	12.8	11.0	52–501	301	412
2. (No basic books, work based on children's interests)	3–16	7.0	9.0	23–319	175	.....
3. (No basic books, work based on children's interests)	6–22	10.5	10.5	50–378	261	382
4. (Some basic books, work based on children's interests)	3–17	12.5	10.5	49–500	359	419
5. (Work based largely on book materials)	3–10	7.3	7.3	53–639	283	.....
6. (Work based solely on book materials)	2–9	6.0	8.0	20–447	270	298

size of class. However, except with respect to the conditions mentioned, there are no significant differences in the various classes. If the results were to be carried through to a satisfactory conclusion, it would be necessary to control these factors. It would likewise be desirable to follow the pupils on through the higher grades—a course which is also impossible because the turnover in the enrolment is so great that results would be valueless. For example, in one class leaving Grade VI in 1936 there were only six of the original members—one in six.

Dewey said in the article referred to above:

The act of writing—especially in the barbarous fashion, long current in the school, of compelling the child to write on ruled lines in a small hand and with the utmost attainable degree of accuracy—involves a nicety and complexity of adjustments of muscular activity which can be definitely appreciated only by the specialist. As the principal of a Chicago school has wittily remarked in this connection, "the pen is literally mightier than the sword." Forcing children at a premature age to devote their entire attention to these refined and cramped adjustments has left behind it a sad record of injured nervous systems and of muscular disorders and distortions. While there are undoubted exceptions, present physiological knowledge points to the age of about eight years as early enough for anything more than an incidental attention to visual and written language form.[1]

While the evidence is not so certain in the field of reading, there is little doubt that the drills required by the older teaching methods often result in the conditions to which Dewey refers; and, from the angle of personality development, it is thought that these drills contribute to a great deal of unhappiness in school. While the effect on personality is a matter of subjective judgment, opinions secured in this study were in agreement. Parents were asked to respond to a series of questions designed to check the relative happiness of the children involved. The number of affirmative answers to the question, "Is your child happy in school?" were 25 per cent greater for the teachers using activity methods than for those using formal methods. The answers to other questions verified this figure. However, the whole problem is so subjective as to render valueless a detailed report of the questionnaire.

It is useless to argue that children do not enjoy learning. Assignments which are reasonable and definite are always eagerly attacked by children. Drills, on which results can be measured, are popular with pupils, but to assume that the diet should be constant may be questionable. If the same drill can be achieved through meaningful situations which create a happier learning atmosphere, it seems that the plan is worth trying. On the other hand, if the necessary drill can be secured in ten minutes via the traditional route, it seems a waste of time to spend fifteen minutes in drill through "meaningful" experience. It is probable that time is wasted in the use of the experience method, but it has never been proved that there is no waste of time

[1] John Dewey, *op. cit.*, p. 320.

in drill. It would seem fair to conclude from the facts reported in this article that the child can be taught meaningful facts about his environment while he is learning the linguistic tools for reading. It may be assumed that the knowledge of meaningful facts will lead to a further desire to read, and further reading will give increased drill. The number of meaningful facts which may be taught is limited only by time and by the imagination and the initiative of the teacher.

SUMMARY

1. Some leading students of the problem believe that the current-experience method of teaching reading fails to give systematic repetition of a minimum basic vocabulary in meaningful reading, which should result in word-learning.

2. Lee reports that the activity method results in lower grade placement for all types of pupils in the primer and in first and low-second grades.

3. Evidence gathered from the first grades of a small city system indicates that, insofar as testable drill materials are concerned, the experience method actually provides as much repetition as does the drill method. Stenographic reports of reading situations show that, for the minimum basic word list, the first-grade child taught by the experience method is even more likely to receive drill or repetition of basic words than is the child taught by the traditional method. The former not only encounters at least as many words, but he is likely to be given more repetitions of the words.

4. Subjective evidence relative to child adjustment in school favors the experience method even where the evidence is given by parents who object to "activity."

5. The factors involved in the problem are so numerous as to be uncontrollable in a small situation. Continued careful check on the basis of tests is desirable in order that the value inherent in the good things of the traditional school may not be lost. Tests are necessary to determine whether the objectives attributed to the experience method, such as good personality adjustment, are actually achieved.

6. The acquisition of meaningful facts justifies the experience method on the basis of factors other than drill. Nevertheless, word drill may be, and seemingly is, given as well or better under the current-experience method.

THE SOCIO-ECONOMIC STATUS OF THE HOME AS A FACTOR IN SUCCESS IN THE JUNIOR HIGH SCHOOL

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The home plays an important part in determining the child's success, failure, and persistence in school. Studies consistently show high correlation between the progress of children in school and the educational, economic, and social advantages in the home.

As part of an investigation involving 146 pupils of superior ability in Northeast Junior High School in Kansas City, Kansas, a study was made in 1935 of the socio-economic status of the home of each child concerned. Each of the 146 superior pupils had an intelligence quotient of 110 or higher. Of these bright pupils, twenty-seven were failing in at least one major subject or were receiving school marks that averaged no higher than the lowest passing mark; another twenty-seven were enjoying much success and were receiving school marks averaging "2" (superior) or better; and ninety-two pupils were receiving marks averaging "3" (average). These three groups were designated the "failure group," the "success group," and the "average group," respectively. The mean intelligence quotient for each of these groups was approximately equal. The data of Table 1 furnish a distribution of the 146 pupils by group, grade, and sex.

Socio-economic status of three groups.—The chief instrument used in studying the conditions of the homes was the Sims Score Card for Socio-economic Status—a simple, convenient, and fairly objective device by which to ascertain and record the general cultural, social, and economic home background. In this device an underscoring of "yes" or "no" answers to twenty-three short questions regarding home and family gives an index to both the cultural and the economic status of the home. The results from the use of this easily

administered score card permit a numerical rating with which statistical comparison of homes can be made.

Other indexes of the home and family standing of these three groups of pupils given consideration were: (1) occupations of the

TABLE 1

DISTRIBUTION OF THREE GROUPS OF SUPERIOR JUNIOR HIGH SCHOOL PUPILS ACCORDING TO GRADE AND SEX

Grade	Boys		Girls		Both	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Success group:						
Grade VII	1	0.7	8	5.5	9	6.2
Grade VIII	1	0.7	6	4.1	7	4.8
Grade IX	2	1.4	9	6.2	11	7.5
Total	4	2.7	23	15.8	27	18.5
Average group:						
Grade VII	13	8.9	25	17.1	38	26.0
Grade VIII	9	6.2	16	11.0	25	17.1
Grade IX	12	8.2	17	11.6	29	19.9
Total	34	23.3	58	39.7	92	63.0
Failure group:						
Grade VII	5	3.4	2	1.4	7	4.8
Grade VIII	3	2.1	3	2.1	6	4.1
Grade IX	10	6.9	4	2.7	14	9.6
Total	18	12.3	9	6.2	27	18.5
All groups:						
Grade VII	19	13.0	35	24.0	54	37.0
Grade VIII	13	8.9	25	17.1	38	26.0
Grade IX	24	16.4	30	20.5	54	37.0
Total	56	38.4	90	61.6	146	100.0

parents; (2) home ownership; (3) a record with the family-service agency, which would indicate economic dependence; and (4) telephone service in the home.

Rating of homes.—Homes of the 132 pupils for whom data were available distributed themselves into 11 socio-economic levels according to the classifications on the Sims score card. In Table 2 are shown the percentages of homes represented by the three groups of

pupils falling in each level. If the Sims level of "medium" is considered average, only 37.0 per cent of the pupils in the failure group represent homes which score above the average, while the corresponding percentages for the average group and the success group are 50.0 and 81.4, respectively.

It is apparent that on the basis of the Sims scores the homes of the superior pupils who are failing in school are materially inferior to

TABLE 2

PERCENTAGE DISTRIBUTION, ACCORDING TO SCORE ON SIMS SCORE CARD FOR SOCIO-ECONOMIC STATUS, OF SUPERIOR PUPILS IN THREE ACHIEVEMENT GROUPS

Score	Rank on Sims Card	Success Group	Average Group	Failure Group
36	High*	...	...	...
29–35	Highest	...	...	...
24–28	Very high	11.1	7.7	...
17–23	High	33.3	19.2	18.5
13–16	Medium high	37.0	23.1	18.5
10–12	Medium	11.1	24.4	33.3
7– 9	Medium low	3.7	16.7	14.8
5– 6	Low	3.7	6.4	11.1
3– 4	Very low	...	...	3.7
1– 2	Lowest	...	2.5	...
0– 0.9	Low*	...	...	...
Total	...	99.9	100.0	99.9
Lower quartile	...	13.0	9.4	8.6
Median	...	15.9	12.5	11.3
Upper quartile	...	20.6	17.2	15.1

* Indeterminately.

those of the superior pupils who are more than usually successful in their school work and somewhat inferior to those of superior pupils who are achieving average success in school. Other investigators have reported somewhat similar relations between home and success in school.

Occupations of parents.—The occupational classifications of the fathers of the pupils of the three groups show significant differences from group to group when measured by the Sims score card. In Table 3 are shown the percentages of fathers of these pupils in the five occupational classes.

The fathers of the pupils in the failure group are chiefly unskilled laborers, two-thirds appearing in Class V, the lowest on the Sims score card. Close to nine-tenths (88.9 per cent) of the fathers of this group are either skilled or unskilled laborers, and the other tenth (11.1 per cent) follow occupations that score no higher than Occupational Class III, which may be taken as average for all occupations listed by Sims.

More than half (55.5 per cent) of the fathers of the pupils in the success group follow occupations that fall in Occupational Classes

TABLE 3

PERCENTAGE DISTRIBUTION, ACCORDING TO CLASSIFICATION ON SIMS SCORE CARD FOR SOCIO-ECONOMIC STATUS, OF OCCUPATIONS OF FATHERS OF SUPERIOR PUPILS IN THREE ACHIEVEMENT GROUPS

Occupational Class	Success Group	Average Group	Failure Group
I. Professionals, higher executives	.....	1.3	.....
II. Commercial service, business proprietors	22.2	7.8	.....
III. Artisan proprietors	33.3	2.6	11.1
IV. Skilled laborers, small shop owners	33.3	24.7	22.2
V. Unskilled laborers	11.1	63.6	66.7
Total	99.9	100.0	100.0

II and III, which may be ranked as average or better. A third are small shop-owners, school teachers, and the like and fall in Class III, while 22.2 per cent of them hold commercial positions or are business proprietors and the like (Class II). These percentages are in direct contrast to the finding that only about a tenth (11.1 per cent) of the fathers of the failure group are found in occupations that may be rated as high as Class III, no father of the latter group following an occupation which can be listed higher than Class III. Only about a tenth (11.1 per cent) of the fathers of pupils in the success group are found in the unskilled-labor class.

For the pupils of the average group the fathers' occupations are distributed in the following proportions: slightly more than a tenth (11.7 per cent) fall in Class III or above; approximately a fourth

(24.7 per cent) are skilled laborers; and nearly two-thirds (63.6 per cent) are unskilled laborers.

If the father's occupation is considered as an index to the socio-economic status of the home, it would seem that pupils of the failure group are coming from homes which are socially, economically, and educationally less favored than are those of the success group. The cultural level of homes among pupils of the average group also seems higher than that exhibited by homes among the failure group, though the difference between these two groups seems not to be in strikingly sharp contrast. These results are in line with the findings of other investigations which compare the occupations of fathers and the success and persistence of children in school.

Home ownership.—The majority of families in Kansas City, Kansas, where this investigation was made, own the homes in which they live. So general is this situation that, where it is not the case, inequalities of family means and ambitions may be reflected. Less than half (44.4 per cent) of the pupils of the failure group come from homes owned by their parents, while approximately three-fourths (74.0 per cent) of the pupils in the success group are from homes which are owned by the parents. Slightly more than half (54.0 per cent) of pupils in the average group come from homes owned by their parents. The condition brought out by this comparison may reflect the relative stability of homes represented by these three groups of pupils.

Family-service agency record.—During the year prior to this investigation a far greater proportion of families of the failure group than of the other two groups had been aided by the Family Service Bureau, a relief organization then working through the local Community Chest Association. The percentages of families in the three groups receiving such aid are as follows: failure group, 40.7, average group, 18.0; and success group, 7.4. The decidedly larger percentage of dependent families in the failure group seems to give further evidence that the environmental influences of pupils in this group are definitely inferior to those of the other two groups.

Telephone service in the home.—The home installation of telephone service is by some investigators taken as an index that the cultural

level of the home is above the average. Kornhauser[1] divided the parents of a thousand children in Pittsburgh, Pennsylvania, into "more wealthy" and "less wealthy" groups by basing his division on the possession of a telephone in the home. A survey of the three groups of the present investigation reveals that the percentage of homes with telephones in the failure group (25.9) is less than half the percentage in the success group (59.3) and approximately five-sixths the percentage in the average group (31.5).

On the bases of the last three criteria, the homes represented by the failure group are seen to be of lower economic standing than those represented by pupils of either the success group or the average group. Pupils of the success group seem to be coming from homes that stand out above those from which the pupils in the failure group come. Homes of the average group also show distinct and significant advantages over those of the failure group.

Conclusion.—The results of the investigation made of the homes of these three groups of superior pupils, coupled with the findings of intimate investigations made for each of the twenty-seven pupils in the failure group, seem to indicate that the unfavorable home conditions under which pupils of the failure group live are a contributing factor of major importance in their unsatisfactory school work. Among the possible lines of cause and effect may be suggested the following:

1. Homes of these pupils show a general lack of inspiration and encouragement, and this lack reflects itself in the affected school work.

2. Homes do not provide an adequate place for home study.

3. Lowered vitality and physical weakness, probably caused by undernutrition or malnutrition, appear in some instances.

4. The parents' indifference to the children's school success seems to be responsible for the general lack of ambition, industry, perseverance, and self-confidence evidenced by many pupils in the failure group.

5. Lack of proper school materials with which to work, such as

[1] Arthur W. Kornhauser, "The Economic Standing of Parents and the Intelligence of Their Children," *Journal of Educational Psychology*, IX (March, 1918), 159–64.

books, pencils, and gymnasium equipment, is evident. Home conditions seem definitely responsible for this handicap.

6. The existence of personality difficulties in some instances is evidenced by defiance of discipline, moodiness, bullying, and general inability to get along with schoolmates and teachers. Conditions in the home seem to be responsible, at least in part, for these difficulties.

7. Frequent absences occur, occasioned in some instances by poor health, the lack of proper clothing, or both.

8. Proper parental supervision is lacking. This lack results in an unwise use or an improper distribution of the pupil's time. Some pupils of the failure group were without adult supervision from school dismissal at 2:35 P.M. until 8:00 or 9:00 P.M., when parents arrived home from work, often too weary to be concerned about the children's programs.

9. Possibly parents of pupils in the failure group possess certain undesirable character traits, such as laziness, lack of ambition, or other faulty personality tendencies. In such cases these character traits, passed on to their children either by processes of heredity or through imitation, could easily be contributory to unsatisfactory school records.

AN INFORMATIONAL UNIT ON TIME

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There are many topics in the subject matter of arithmetic which have deep historical and social significance. Around these topics valuable informational units could be built—units which would lead children to an understanding and an appreciation of our social institutions and which would help children to identify themselves with, and orient themselves in, the world into which they were born. The meaning, the development, and the modern applications of such socially useful institutions as taxes, insurance, barter, money, weights, and measures are known to few, but these topics contain many valuable concepts which are entirely comprehensible and vitally interesting to children of elementary-school age.

It was in accordance with this view of enrichment of the curriculum in arithmetic that a unit on the subject of time measurement was constructed and taught experimentally to a fourth-grade class in the training department at Eastern State Normal School. It is one of a series of informational units in arithmetic developed and taught in this manner by graduate students at the University of Minnesota under the direction of Professor Leo J. Brueckner. The writer wished to collect data concerning the suitability of time measurement as a unit for Grade IV.

In the organization of the unit an attempt was made to follow the Bruner plan.[1] Bruner classifies units according to the purpose for which they are constructed. The theme or generalization type was chosen because in this kind of unit the teacher starts with a generalization or pivotal issue, the understanding of which would contribute to the upbuilding of good citizenship. The content of such a unit must be of secondary importance to the theme itself. This plan, incidentally, offers a fine opportunity for the blending of the two extreme educational points of view of adult-chosen content and chil-

[1] H. B. Bruner, *The Place of Units in Course of Study Construction*. Bulletin No. 2. Pierre, South Dakota: State Superintendent of Public Instruction, 1930.

dren's interests. The theme of this unit was: "Time measurement is a most useful device for promoting civilized co-operation on a large scale."

The ten steps suggested by Bruner were used as a guide in building this unit. They are as follows:

1. Determine what theme or themes are to control the unit.
2. Select the assimilative materials by which the big understandings or themes are to be developed. . . . .
3. Select the activities through which the assimilative materials may be acquired by the pupils. . . . .
4. Write the overview. . . . .
5. Write the generalizations or small themes and the specific objectives. . . . .
6. Write the suggested approaches. . . . .
7. Decide upon possible teaching unit captions which will indicate natural or interesting ways of breaking up the outline for teaching purposes.
8. List possible problems that will suggest a mode of attack from the standpoint of the pupil. . . . .
9. Suggest a few culminating activities. . . . .
10. List the outcomes which you consider essential. If desired, some informal tests may be added for the use of the teacher.[1]

For teaching purposes, the subject of time measurement was divided into four major topics, each with several subtopics:

I. How the cave man told time
   1. The shadow on the rock
   2. The shadow clock
   3. The rope clock
   4. The flower clocks

II. Clocks from long ago to now
   1. The sundial
   2. The water thief
   3. The time candle
   4. The sand glass
   5. Early mechanical clocks
   6. Clocks with pendulums
   7. Smaller clocks and watches
   8. Electricity and clocks

III. How the world gets its time
   1. The causes of day and night
   2. The lines on the globe
   3. Setting the clocks
   4. Standard time
   5. Daylight-saving time

IV. The story of the calendar
   1. What the moon told men
   2. Calendars from long ago to now
   3. Calendar reform

Because reading materials suitable for fourth-grade pupils were meager, the writer prepared mimeographed articles covering all the topics, which were used for class instruction. Tests covering the con-

[1] *Ibid.*, pp. 20–21.

tent of the articles were given to three fourth-grade classes outside the school in which the unit was to be taught to determine whether the tests were comprehensible to fourth-grade pupils and whether any changes were needed for clarification of points of obvious reading difficulty. From a study of standard tests and social-science materials, Mathews[1] determined that, if materials are comprehensible to the point of 75 per cent by children of a grade, the material is suitable for that grade. This criterion was used, and standard tests were given to these groups of children to determine their reading ability. The test scores were helpful in the revision of the articles for the teaching of the unit.

Twenty class periods were used in the development of the unit. Tests were given at the end of each of the four major topics. The character of the lessons varied, and there were other types which might have been given if more time had been available. The following list shows the nature of some of the lessons: simple discussions of what pupils already knew on the topic; work-type reading lessons, in which the pupils read articles to answer questions, to prove statements, to outline points, etc.; preparation of reports; giving of reports; planning of activities; making of replicas of early timepieces (shadow clocks, sundials, water clocks, etc.); coloring maps to show time zones; solving clock problems; and reading timetables.

The subject of time lent itself to a variety of interesting correlations. In the art periods children made a frieze depicting the history of clocks and showing the ways in which man has measured time through the ages. As a part of the assembly program which was the culminating activity of the unit, the frieze was shown to the school as a motion picture and was accompanied by explanatory talks which the pupils had prepared in the language class. In the assembly some pupils took part in a play dramatized from the story of the water clock, while others demonstrated the sundial and other clocks that they had made.

As previously stated, the purpose of this experiment was to assemble some information regarding the possibilities of a unit on time in the fourth-grade curriculum. The following facts were re-

[1] C. O. Mathews, *The Grade Placement of Curriculum Materials in the Social Studies*. Teachers College Contributions to Education, No. 241. New York: Teachers College, Columbia University, 1926.

vealed by the experiment: (1) The subject of time measurement was of genuine interest to this group of pupils during the entire unit. (2) The reading materials of the unit were not too difficult. (3) Illustrative materials, such as odd clocks and pictures of early timepieces and calendars, are available. (4) A large percentage of the pupils were able to understand such terms as "standard time," "calendar reform," "daylight-saving," "pendulum," "rotate," "time-recording," and "telescope." (5) Activities of special interest were the making of early timepieces, the giving of reports on materials read, the reading of stories related to the unit, dramatization of stories, and related art work. (6) To some extent at least, pupils were led to regard arithmetic as something more than a dull subject—to regard it as a social institution devised by man as an instrument of precision.

A few difficulties were encountered in the development of the unit. Suitable reading materials for children were difficult to find. Much time was required by the teacher to gather material on the subject. An understanding of the life of primitive man would have proved helpful. The subjects of calendar development and standard time gave the most difficulty. It might be well to divide the unit and teach this portion in a later grade after the geographic concepts involved (longitude and the movements of the earth) have been developed. Because of the difficulties encountered in the development of the unit, other schools should try out the unit in Grades IV and V in order that the best possible grade placement may be determined.

The story of man's struggles in measuring time parallels the history of civilization. It is a true story, glorious and romantic, with an appeal to both old and young. Children who were taught this unit interested their elders in the subject, and requests came from parents for copies of the articles.

As a unit, the subject of time meets Charters' standards,[1] for it is comprehensible, useful, and interesting. Because the concept of time-measurement functions vitally in the understanding of the world today and because it has proved comprehensible and of dynamic interest to at least one group of pupils, the writer feels that it should be accorded a place in the curriculum.

[1] W. W. Charters, *Curriculum Construction*, pp. 97–100. New York: Macmillan Co., 1923.

A COMPARISON OF THE METROPOLITAN READINESS TESTS AND THE PINTNER-CUNNINGHAM PRIMARY MENTAL TEST

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The Metropolitan Readiness Tests[1] were devised to measure various aspects of readiness for school instruction among beginning pupils. The authors suggest that these tests, when used as a battery, will show the extent to which pupils are ready to learn first-grade skills and will provide an analysis of difficulties revealed. Inspection of the items which make up the tests suggests that several types of ability generally considered essential to success in Grade I have been included. To date, however, little information about the experience of school workers with this test in practical situations has been published. Information on how well the test predicts first-grade success and how it compares with intelligence tests commonly used at the primary level would be of interest. Findings concerning the latter of these considerations for a large number of cases are presented in this article. It is planned that a later article will deal with the accuracy of the prediction of achievement in Grade I. Specifically, the present study compares the Metropolitan Readiness Tests and the Pintner-Cunningham Primary Mental Test[2] on the basis of the records of more than three thousand beginning first-grade children.

The two tests were given to the entire first-grade enrolment in the Cincinnati public schools in September, 1935. The Pintner-Cunningham test was administered and scored by the staff of the Psychological Laboratory of the Cincinnati schools. The Metropolitan Readiness Tests were given by teachers and scored in the Psychological Laboratory. Since the basis of first-grade membership varies from city to city, it was decided to use only the records of

[1] Gertrude Hildreth and Nellie L. Griffiths, Metropolitan Readiness Tests. Yonkers-on-Hudson, New York: World Book Co., 1933.

[2] Rudolf Pintner and Bess V. Cunningham, Pintner-Cunningham Primary Mental Test. Yonkers-on-Hudson, New York: World Book Co., 1923.

pupils within a definite age range. For purposes of this study the population was therefore limited to the 3,561 first-grade pupils whose ages as of September, 1935, were in the range of five years and eleven months to six years and ten months. These limits were chosen because they constitute approximately the normal age range of pupils entering Grade I in Cincinnati for the first time. The group may therefore be considered representative of beginning first-grade pupils in Cincinnati and of pupils of the age range indicated in comparable cities. Table 1 gives a frequency distribution of the chronological ages as of September, 1935, for the 3,561 pupils included in the study. The pupils included were enrolled in the 65 elementary

TABLE 1

CHRONOLOGICAL AGES AS OF SEPTEMBER, 1935, OF 3,561 FIRST-GRADE PUPILS GIVEN METROPOLITAN READINESS TESTS AND PINTNER-CUNNINGHAM PRIMARY MENTAL TEST

Chronological Age	Number of Pupils
5 years, 11 months through 6 years, 1 month	878
6 years, 2 months through 6 years, 4 months	1,052
6 years, 5 months through 6 years, 7 months	926
6 years, 8 months through 6 years, 10 months	705
Total	3,561
Median age	6 years, 4.57 months

schools within the system. The number of colored children included was 631, or 17.7 per cent of the total.

The Pintner-Cunningham test yields ratings which may be expressed in terms of intelligence quotients. Table 2 gives a distribution of the intelligence quotients achieved by the 3,561 pupils. The average intelligence quotient of this group was slightly below 100, which is usually considered characteristic of a random sampling of children in any given age group. The median for the white children as a group proved to be 100.3, and for the colored children it was 85.1.

A distribution of the total scores for the 3,561 Cincinnati pupils on the Metropolitan Readiness Tests is given in Table 3. A comparison of these data for Cincinnati pupils with corresponding data for the pupils upon whom the norms are based is of interest. The *Manual of Directions* gives a distribution of total scores for 4,440 pupils with

ages between 6–0 and 6–11, practically the same age range as that involved in the Cincinnati group. The median of the test authors'

TABLE 2

DISTRIBUTION OF 3,561 FIRST-GRADE PUPILS ACCORDING TO INTELLIGENCE QUOTIENTS ON PINTNER-CUNNINGHAM PRIMARY MENTAL TEST ADMINISTERED IN SEPTEMBER, 1935

Intelligence Quotient	Number of Pupils	Intelligence Quotient	Number of Pupils
145–49	2	85–89	390
140–44	5	80–84	321
135–39	26	75–79	235
130–34	64	70–74	167
125–29	107	65–69	78
120–24	150	60–64	17
115–19	217	55–59	2
110–14	299		
105– 9	323	Total	3,561
100–104	388	Median	97.0
95–99	393	Mean	97.6
90–94	377	Standard deviation	16.2

TABLE 3

DISTRIBUTION OF 3,561 FIRST-GRADE PUPILS ACCORDING TO TOTAL SCORES ON METROPOLITAN READINESS TESTS ADMINISTERED IN SEPTEMBER, 1935

Score	Number of Pupils	Score	Number of Pupils
120–24	1	45–49	176
115–19	10	40–44	129
110–14	32	35–39	109
105– 9	91	30–34	61
100–104	137	25–29	36
95–99	201	20–24	32
90–94	261	15–19	19
85–89	291	10–14	10
80–84	275	5– 9	9
75–79	336	1– 4	1
70–74	321		
65–69	296	Total	3,561
60–64	277	Median	72.7
55–59	228	Mean	71.4
50–54	222	Standard deviation	20.9

distribution is 76.6, the mean 74.4, and the standard deviation 21.2. The Cincinnati group achieved slightly lower and somewhat less variable scores than the corresponding age group involved in the

derivation of the test norms. If the latter group is assumed to be of normal intelligence, the finding of a somewhat lower average is consistent with the fact that the average intelligence quotient on the Pintner-Cunningham test for the Cincinnati group when colored children were included proved to be slightly below 100.

Since the Metropolitan and the Pintner-Cunningham tests were given to the same pupils, it is possible to determine the relation between the two tests by correlational procedure. Table 4 gives the

TABLE 4

CORRELATIONS BETWEEN SCORES ON PINTNER-CUNNINGHAM PRIMARY MENTAL TEST AND SCORES ON METROPOLITAN READINESS TESTS FOR 3,561 FIRST-GRADE PUPILS

Subtests of Metropolitan Tests Correlated with Pintner-Cunningham Test	Correlations in Age Groups				
	5 years, 11 months through 6 years, 1 month	6 years, 2 months through 6 years, 4 months	6 years, 5 months through 6 years, 7 months	6 years, 8 months through 6 years, 10 months	Whole Group
Test 1	.58 ± .015	.59 ± .014	.59 ± .014	.57 ± .017	.59 ± .007
Test 2	.67 ± .013	.68 ± .011	.70 ± .011	.64 ± .015	.68 ± .006
Test 3	.58 ± .015	.61 ± .031	.61 ± .014	.64 ± .015	.61 ± .007
Test 4	.57 ± .015	.56 ± .014	.54 ± .016	.55 ± .018	.56 ± .008
Test 5	.69 ± .012	.71 ± .010	.72 ± .011	.71 ± .013	.72 ± .005
Test 6	.56 ± .016	.59 ± .136	.64 ± .013	.57 ± .017	.58 ± .008
All tests	.79 ± .009	.83 ± .007	.81 ± .008	.79 ± .010	.81 ± .004

coefficients of correlation between scores on the various parts of these tests for different age groups and for the whole group. Between the total scores of the two tests the coefficient of correlation is .81 ± .004. It is not likely that the reliability coefficient of either of these tests is much higher. Furthermore, the two tests correlated somewhat more closely than existing primary intelligence tests correlate with one another. Sangren,[1] for example, found the following correlations, based on the scores of one hundred first-grade children, between the Pintner-Cunningham test and each of the other tests named: Rhode Island Intelligence Test, .639; Kingsbury Primary

[1] Paul V. Sangren, "Comparative Validity of Primary Intelligence Tests," *Journal of Applied Psychology*, XIII (August, 1929), 401.

Group Intelligence Scale, .642; Pressey Primary Classification and Verifying Tests, .643; Stanford Revision of the Binet-Simon Scale, .655; Detroit First-Grade Intelligence Test, .732; Haggerty Intelligence Examinations, .753; Otis Group Intelligence Scales, .759. In the present study the correlations between the individual subtests of the Metropolitan tests and the whole Pintner-Cunningham test range from $.56 \pm .008$ for Test 4 to $.72 \pm .005$ for Test 5.

Although the data in Table 4 show the two tests to be closely correlated, it does not follow that they are equally good measures of readiness for first-grade instruction. To establish this assumption, the ratings on these tests will have to be compared with measures of the first-grade achievement of the pupils involved. As has already been stated, it is planned to make this comparison the basis of a later study. The remainder of this article will analyze somewhat more fully the scores which result from the different parts of the Metropolitan tests.

One of the unique features of the Metropolitan Readiness Tests is that each of the six individual tests is devised to measure a particular aspect of readiness. The resulting scores are therefore analytical of the child's readiness and can be used to advantage by the teacher in planning what instructional activity should be used. Unfortunately no norms for these individual tests are given. The scores achieved by the 3,561 pupils in Cincinnati provide a preliminary basis for such norms. Distributions of these scores are given in Table 5.

Test 1 requires the detection of similarities and differences in pictures and symbols. It contains twenty-three pairs of pictures, figures, symbols, and letter combinations. Eleven of the pairs are alike, and the remaining twelve are unlike. The distribution of the scores of the 3,561 Cincinnati children on Test 1 shows that 11.5 per cent of the pupils made zero scores. The failure of this test to differentiate among the abilities of so large a proportion of the pupils tested is of course an objectionable feature. An inspection of some of the actual responses associated with these zero scores revealed that many children apparently failed to understand the directions given. It also revealed that these zero scores were not associated with zero scores on other parts of the test battery. The right-minus-

TABLE 5

DISTRIBUTION OF SCORES ON INDIVIDUAL TESTS 1–6 OF METROPOLITAN READINESS TESTS FOR 3,561 FIRST-GRADE PUPILS TESTED IN CINCINNATI IN SEPTEMBER, 1935

Score	Number of Pupils
Test 1 (Similarities):	
22–23	26
20–21	67
18–19	256
16–17	305
14–15	429
12–13	452
10–11	466
8– 9	379
6– 7	349
4– 5	235
2– 3	143
1	44
0	410
Total	3,561
Median	11.0
Mean	10.5
Standard deviation	5.7
Test 2 (Copying):	
11	381
10	340
9	347
8	292
7	260
6	240
5	239
4	241
3	313
2	349
1	297
0	262
Total	3,561
Median	6.3
Mean	6.2
Standard deviation	3.6
Test 3 (Vocabulary):	
19	4
18	17
17	32
16	99
15	175
14	343
13	531
12	582
Test 3—*continued:*	
11	541
10	392
9	284
8	210
7	135
6	76
5	41
4	30
3	22
2	17
1	10
0	20
Total	3,561
Median	12.0
Mean	11.7
Standard deviation	2.9
Test 4 (Sentences):	
15	644
14	733
13	693
12	471
11	359
10	244
9	124
8	83
7	63
6	49
5	33
4	23
3	10
2	11
1	8
0	13
Total	3,561
Median	13.4
Mean	12.8
Standard deviation	2.6
Test 5 (Numbers):	
40	4
38–39	24
36–37	62
34–35	94
32–33	151

TABLE 5—*Continued*

Score	Number of Pupils	Score	Number of Pupils
Test 5—*continued:*		Test 6 (Information):	
30–31	178	16	118
28–29	224	15	383
26–27	212	14	614
24–25	265	13	624
22–23	233	12	544
20–21	273	11	405
18–19	293	10	276
16–17	312	9	171
14–15	318	8	140
12–13	313	7	76
10–11	225	6	68
8– 9	158	5	35
6– 7	101	4	33
4– 5	62	3	25
2– 3	36	2	16
0– 1	23	1	11
		0	22
Total	3,561	Total	3,561
Median	19.6	Median	12.9
Mean	20.2	Mean	12.3
Standard deviation	8.3	Standard deviation	2.9

wrong method of scoring this test is sometimes responsible for a number of zero scores even though the children in question have marked some items correctly. Possibly the directions for this test and the method of scoring it could be so modified as to reduce the number of zero scores without reducing the test's validity.

Test 2 consists of eleven different designs—geometrical figures, letters, and numerals—which are to be copied by the pupil. An examination of the distribution of the scores on this test shows that 7.4 per cent of the pupils made zero scores and that an even larger proportion (10.7 per cent) made maximum scores. The distribution tends to be rectangular but is bimodal and is skewed with an increasing concentration of scores toward the upper end, 30 per cent of the pupils having scores equal to or within two points of the maximum. The nature of the distribution would indicate that the test should be made more discriminating at both the upper and the lower ends. This result might be effected by the addition of simpler and more difficult items.

Tests 3 and 4 require the pupil to mark pictures corresponding to descriptions read by the examiner. The frequency distributions of the scores achieved by the Cincinnati pupils on Test 3 indicate that few pupils made either zero or maximum scores. Most of the scores are concentrated toward the center, over half (57.5 per cent) lying within the range of 10–13, inclusive. It is apparent that the test differentiates only among pupils who do very well or very poorly.

A study of the frequencies on Test 4 shows a piling-up of scores at the upper end of the distribution, 71.4 per cent of the scores being equal to or within three points of the maximum. Evidently the test differentiates only among children who have very little of the abilities measured. In its present form the inclusion of this test in the battery merely adds, in most cases, a constant quantity to the pupil's total score. The test needs to be made much more difficult if it is to be discriminating for first-grade pupils.

Test 5 is intended to measure the pupil's knowledge of number. The test involves number vocabulary, counting, ordinal numbers, recognition of written numbers, writing numbers, interpreting number symbols, the meaning of number terms, the meaning of fractional parts, recognition of forms, telling time, and the use of numbers in simple problems. An analysis of the frequencies for this test shows that the scores distribute themselves more nearly in the form of a normal distribution than do those for any of the other individual tests. From the standpoint of the evidence yielded as to variability among children in the abilities measured, this test seems to be the best in the battery. It is of interest to note in Table 4 that this test gave the highest correlation with the Pintner-Cunningham test.

Test 6 measures common knowledge by means of a multiple-choice picture test of sixteen items. The child is required to select from a row of four pictures the one that satisfies the examiner's description. The frequency distribution of the scores on this test is heavily skewed in that a large proportion of the scores are concentrated toward the upper end of the scale. Nearly 50 per cent of the cases lie within the range 13–16, inclusive. Consequently the test yields practically no evidence on the variability among a large proportion of children with reference to the factors measured.

CONCLUSIONS

The conclusions concerning the Metropolitan Readiness Tests suggested by the data in the tables are about as follows: (1) The Metropolitan Readiness Tests, when applied to beginning first-grade children, yield ratings which are highly correlated with ratings on the intelligence of such pupils based on the Pintner-Cunningham Primary Mental Test. Further study is necessary to determine which of the two tests yields the better prediction of success in Grade I. (2) Test 1 (Similarities) of the Metropolitan tests yields zero scores for a large number of children but otherwise gives satisfactory evidence of variability among beginning first-grade children. (3) Test 2 (Copying) fails to differentiate among a large group of children who make zero scores and among a somewhat larger group who secure maximum scores. (4) Test 3 (Vocabulary) yields a large proportion of scores which tend to concentrate within a small range in the middle of the scale. Hence, it differentiates only among pupils who have very little and those who have a great deal of the abilities measured. (5) Test 4 (Sentences) yields a preponderance of maximum or nearly maximum scores. (6) Test 5 (Numbers) is the most satisfactory of the individual tests from the standpoint of variability and absence of skewness in the distribution of the scores. (7) Test 6 (Information) yields scores which tend to concentrate toward the upper end of the scale. Hence, it serves to pick out only pupils with very little of the abilities measured.

TRENDS IN THE TEACHING OF HISTORY IN THE ELEMENTARY SCHOOL

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The purpose of this article is to state major trends in the selection of content and the method of teaching history in the elementary school as those trends are revealed in periodical publications from 1899 through 1934. The data were obtained by consulting the several guides to periodical literature and by reviewing all articles which seemed pertinent. The following publications were consulted:

Education
Educational Method
Elementary School Journal (*formerly* Elementary School Teacher)
Historical Outlook (*formerly* History Teacher's Magazine, *now published as* Social Studies)
Journal of Educational Psychology
Journal of Educational Research
Journal of Experimental Pedagogy
Journal of the National Education Association
Progressive Education
Reports of the American Historical Association
Research Bulletin of the National Education Association
School Review
School and Society (*formerly* Educational Review)
Social Frontier
Teachers College Record
Yearbooks of the Department of Classroom Teachers
Yearbooks of the Department of Supervisors and Directors of Instruction
Yearbooks of the Department of Superintendence
Yearbooks of the National Society for the Study of Education

The reports of the Committee of Seven and the Committee of Eight of the American Historical Association were given especial attention.

All articles which might conceivably bear on the subject were read, and 107 were selected as depicting trends clearly and definitely enough to warrant inclusion. The period, 1899–1934, inclusive, was divided into five "cycles" of seven years,[1] partly because it was convenient and partly because seven years is the elementary-school span

[1] One cycle, 1920–27, included eight years.

of the child who enters kindergarten and continues through Grade VI without interruption or acceleration. The distribution of the articles with reference to trends and points of emphasis is displayed in Table 1. When one article exhibited more than one trend, each trend was tabulated.

TABLE 1

HISTORICAL TOPICS OR TRENDS EMPHASIZED IN EDUCATIONAL LITERATURE FROM 1899 TO 1934, INCLUSIVE, AND FREQUENCY OF MENTION OF EACH

Topic or Trend	Frequency of Mention					
	1899 to 1905	1906 to 1912	1913 to 1919	1920 to 1927	1928 to 1934	Total
1. Cause-and-effect relations	10	6	9	5	1	31
2. Correlation and integration	6	10	2	4	6	28
3. Type lessons	.....	6	1	.....	.....	7
4. Topical method	1	.....	.....	.....	.....	1
5. Problem method	.....	1	2	3	.....	6
6. Unit approach	.....	1	.....	2	1	4
7. Interest and experience of child	7	.....	1	2	2	12
8. Activity and construction work	8	3	7	6	1	25
9. Psychological approach	2	.....	.....	.....	1	3
10. Visual aids	1	3	4	2	6	16
11. Supplementary materials	2	1	.....	.....	1	4
12. Dramatizing	1	.....	.....	1	2	4
13. Development of tolerance	1	.....	1	1	.....	3
14. Decreasing factual material and memory work	4	6	5	.....	1	16
15. Need of trained teachers	2	5	5	1	1	14
Total	45	42	37	27	23	174

In this table "Correlation" is used to signify the organization and teaching of subjects in parallel manner so that the children may be made conscious of intersubject relations. "Integration" is used to describe the process whereby various subjects contribute jointly to the solution of broad topics or general problems. "Type lessons" are lessons providing a general pattern on which further study is to be based. "Topical method" implies logical organization of history subjects into significant units. "Problem method" emphasizes reflective thinking growing out of a recognized problem situation. By "Unit approach" is meant that process in which large movements are

studied because interest has been aroused by recognition or manipulation of environmental conditions. "Psychological approach" emphasizes the doctrine of interest and accommodation of materials to the needs and the status of the learner. It should be understood that these definitions are supplied merely to interpret Table 1. This paragraph is not intended to be a lexicon which others need or should accept.

It is significant that the ideas of stressing causal relations, correlation, and integration, often considered of recent origin, were emphasized more frequently in the earlier than in the later periods. Years ago the writers in professional journals were pointing out the desirability of an interpretative approach. Of course, there is no evidence in the table to show whether teachers actually followed the course charted by these writers, but the trend in the articles is clear.

Little attention is paid in these articles to the topical method of presenting history, but it is interesting to see that type lessons, then the problem method, then the unit approach were successively emphasized.

Throughout there has been a great deal of emphasis on the appeal to child nature. Each period contributed to some phase of this trend. It is noteworthy that during the earliest period seventeen articles treated activity and construction work, advocated a psychological approach, or emphasized the importance of considering child nature. One or all of these trends was treated during each of the periods, but the heaviest frequencies were in the first period. Of course, the approach was different in the various periods. The psychology of 1900 was quite different from that of 1934, and there was variation in the type of activity advocated and in the extent to which activity and learning were identified. Nevertheless the importance of adapting procedure in consonance with child nature is a recurring theme.

There is a natural increase of emphasis on the use of visual aids, since visual materials are more plentiful now than they were in 1900. It is surprising, however, to find little attention paid to the use of other supplementary materials and to dramatization.

The social objectives of history were treated from time to time in a more or less general or casual manner, but only in the three articles listed under "Development of tolerance" was there sufficient em-

phasis to permit classification. These three articles strongly urged that history be used to develop the tolerance which must underlie human understanding, especially international or intersectional understanding.

It may be that the decreasing number of pleas for the elimination of the purely memoriter approach is indicative of a victory gained. Since 1920 writers have apparently thought it unnecessary to protest against overemphasis on factual materials or memory work.

It is strange that the last two periods record few articles stressing the need of better-trained teachers. While elementary-school teachers now undoubtedly receive better general training than they received before 1920, it is doubtful whether the nature of their training in history and the other social sciences warrants a relaxation of effort. Especially is there no warrant for failure to train teachers if integration, correlation, general activities, and the problem approach are to receive continued emphasis, as Table 1 indicates they may. These approaches necessitate interpretation and organization which are effective only if the teacher has a rich background of training and experience.

It is a conjectural but not unreasonable explanation to suggest that the decrease in the number of articles in the period since 1919 may result not from decreasing interest in the teaching of history but from increasing interest in a unified or activity curriculum of which history is a part. In fact, many such programs have employed the social sciences, especially history, as a core. A study of articles treating the social sciences thus would probably show emphasis on the development of social attitudes, on problem-solving, and on the contribution of historical materials to an understanding of the social order. In recent years many such articles have appeared, but these were not included in this study, which considered articles dealing with history alone.

SELECTED REFERENCES ON ELEMENTARY-SCHOOL INSTRUCTION

II. The Subject Fields

This list of references is the second in a series of three lists relating to instruction at the elementary-school level. The preceding list, appearing in the September number of the *Elementary School Journal*, contains items on the curriculum, methods of teaching and study, and supervision. The present list and the next list in the series include references on these same major aspects of instruction, but the items are grouped by subject fields.

READING[1]

William S. Gray

439. Becker, May Lamberton. *First Adventures in Reading.* New York: Frederick A. Stokes Co., 1936. Pp. xiv+286.

Provides for parents a series of interesting suggestions concerning desirable reading experiences for children of different ages.

440. Betts, Emmett A. "Retardation in Reading," *The Role of Research in Educational Progress*, pp. 186–91. Official Report of the American Educational Research Association, 1937. Washington: American Educational Research Association of the National Education Association, 1937.

Presents conclusions concerning reading deficiencies drawn from "approximately two thousand publications covering a number of areas related to reading problems."

441. Betts, Emmett, A., and Donnelly, Helen E. "Systematic Instruction for Retarded Readers," *Journal of Exceptional Children*, III (February and April, 1937), 66–74; 89, 118–25.

Reports the nature of the difficulties discovered through clinical diagnosis in the case of thirty-two poor readers, the corrective procedures adopted, and the results.

442. Broening, Angela M. "Literary Merit and the Winnetka Formula for Grading Children's Books," *The Role of Research in Educational Progress*, pp. 148–52. Official Report of the American Educational Research

[1] See also Items 401 (Thorndike), 422 (Postel), and 425 (Taylor) in the list of selected references appearing in the September, 1937, number of the *Elementary School Journal*.

Association, 1937. Washington: American Educational Research Association of the National Education Association, 1937.

Presents evidence supporting the view that wise use of the Winnetka formula does not level down the creative reading and expression of pupils.

443. COHEN, LOUIS. "A Comparison of the Value of Extensive and Intensive Reading in Improving Reading Ability in an Occupational School," *Baltimore Bulletin of Education*, XIV (September–October, 1936), 60–62.

Describes the methods adopted for improving reading ability with two paired groups of pupils in the upper grades and compares their progress during a period of ninety-three school days.

444. CRAMER, JOHN FRANCIS. "Australian Tests and American Pupils," *Elementary School Journal*, XXXVII (September, 1936), 17–24.

Compares the average scores made by 814 pupils in two school systems of Washington with those made by six Australian states on the Australian arithmetic and reading tests.

445. CUFF, NOEL B. "Study Habits in Grades Four to Twelve," *Journal of Educational Psychology*, XXVIII (April, 1937), 295–301.

Reports the methods used and the findings of a study involving 1,250 pupils to determine the relative importance of study habits among dull and bright children, pupils of inferior and superior achievement, for the youngest and oldest pupils in given groups, and for different grade groups.

446. DOLCH, E. W. "The First Step in Remedial Reading," *Elementary School Journal*, XXXVII (December, 1936), 268–72.

Shows the percentage that a basic sight vocabulary of 220 words is of the total number of running words in school textbooks in four subjects—reading, arithmetic, geography, and history—in Grades I–VI, inclusive. Gives also the number of these basic sight words known by 65 pupils in a fourth-grade remedial-reading group before and after four weeks of special training.

447. FARRIS, L. P. "Visual Defects as Factors Influencing Achievement in Reading," *Journal of Experimental Education*, V (September, 1936), 58–60.

Compares the reading achievement of 384 pupils in the seventh grade with that of a control group in the same grade of like chronological age and ability but "different in visual acuity."

448. FEATHERSTONE, W. B. "The Speyer School for 'Slow-reading' Children," *Teachers College Record*, XXXVIII (February, 1937), 365–80.

Describes the scope and the character of the program provided for children of less-than-average ability and considers some of the special problems encountered.

449. FRIEDMAN, KOPPLE C., and NEMZEK, CLAUDE L. "A Survey of Reading Interest Studies," *Education*, LVII (September, 1936), 51–56.

Presents an annotated bibliography of thirty-eight studies of reading interests and summarizes significant findings.

450. GATES, ARTHUR I. "The Psychological Basis of Remedial Reading," *Educational Record*, Supplement No. 10, XVII (October, 1936), 109–23.

Discusses the frequency of various types of reading disabilities, their causes, and various aspects of remedial instruction.

451. GRAY, WILLIAM S. "Curriculum Investigations: Reading," *Review of Educational Research*, VII (April, 1937), 139–42, 199–201.

Summarizes essential findings of thirty-three studies relating to reading as a school subject.

452. GRAY, WILLIAM S. "Summary of Reading Investigations (July 1, 1935, to June 30, 1936)," *Journal of Educational Research*, XXX (April, 1937), 553–76.

Points out the major types of studies reported in a hundred published investigations and summarizes the most important findings.

453. HAEFNER, RALPH. "The Influence of the Typewriter on Reading in the Elementary School," *Elementary English Review*, XIII (December, 1936), 291–94.

Summarizes the results of studies of the influence of typewriting on comprehension, perception, and eye-movements in reading.

454. HEGGE, T. G., and WARD, L. B. "Remedial Reading Methods," *American Journal of Orthopsychiatry*, VI (July, 1936), 421–30.

Contrasts methods in which the primary emphasis is in reading as a response to meanings and contextual materials and as a vocal or subvocal response to visual word symbols and their parts. Describes the Hegge-Kirk "Remedial Reading Drills" as an example of the second type of approach.

455. HENDERSON, ELLEN C. *Reading and Speaking Techniques for Teachers in Junior High and Grade Schools*. Chicago: Improvement Publishing Co., 1937. Pp. 218.

Discusses various problems involved in developing "effective oral reading and speaking skills, and correct use of the speech mechanism."

456. HILDRETH, GERTRUDE. *Learning the Three R's*. Minneapolis, Minnesota: Educational Publishers, Inc., 1936. Pp. x+824.

Discusses current problems in teaching reading under the following headings: the reading process, changes in reading practice, reading readiness, reading deficiency, reversal errors in reading and writing, diagnostic methods in reading, remedial work and improved instruction in reading, improving reading techniques.

457. KNIGHT, PEARLE E., and TRAXLER, ARTHUR E. *Read and Comprehend*. Boston: Little, Brown & Co., 1937. Pp. x+234.

Discusses the importance of reading and presents suggestions and exercises for pupils relating to extensive and intensive reading.

458. LaGrone, Truda Gough. "An Analytical Study of the Reading Habits of Deaf Children," *Journal of Experimental Education*, V (September, 1936), 40–57.

Presents data secured from ninety-four pupils, varying from Grade I to college-preparatory level, to determine (1) the presence or absence of developmental stages in three fundamental elements of the reading habit and (2) the relation between progress in these elements and other measurable factors related to the reading process.

459. Leland, Bernice. "Case Study Approach to Difficulty in Reading," *Childhood Education*, XIII (April, 1937), 374–78.

Discusses the relation between non-conforming behavior and inability to read, the sources of reading disability, the need for the use of various remedial techniques, and the importance of early detection of reading difficulties.

460. Monroe, Marion; Backus, Bertie; and Principals, Counselors, and Teachers of the Washington, D.C., Public Schools. *Remedial Reading*. Boston: Houghton Mifflin Co., 1937. Pp. xii+172.

Describes the motives for the remedial-reading project as a part of the character-education experiment in Washington, D.C.; discusses general principles underlying diagnosis of reading disabilities and remedial instruction; and outlines the methods used and the results attained in elementary, secondary, and vocational schools.

461. Nolte, Karl F. "Simplification of Vocabulary and Comprehension in Reading," *Elementary English Review*, XIV (April, 1937), 119–24, 146.

Compares the comprehension scores made by 1,112 sixth-grade pupils in eight school systems on a reading selection in its original form and in simplified forms with the vocabulary limited to (1) the first 2,500 of the Thorndike word list and (2) the words of the Ogden Basic English list.

462. Orton, Samuel Torrey. *Reading, Writing and Speech Problems in Children*. New York: W. W. Norton & Co., Inc., 1937. Pp. 216.

Discusses at length various types of disorders in the development of the language faculty, including developmental alexia and developmental word deafness.

463. Phillips, Marina, and Coe, Ethel C. "How the Reading Program of a Rural School System Was Improved," *Northern Illinois State Teachers College Bulletin*, Vol. V, No. 1 (1935–36), pp. 1–22. De Kalb, Illinois: Northern Illinois State Teachers College.

Describes the steps taken and the results secured in improving the reading of elementary-school pupils in a county of northern Illinois.

464. Seegers, J. C. "A Study of Children's Reading," *Elementary English Review*, XIII (November, 1936), 251–54.

Reports the results of "an analysis of the undirected, uncontrolled reading of books done outside school hours by 924 pupils of a city school."

465. *The Teaching of Reading—A Second Report.* Thirty-sixth Yearbook of the National Society for the Study of Education, Part I. Bloomington, Illinois: Public School Publishing Co., 1937. Pp. viii+442.

Summarizes recent progress in reading, identifies current problems, considers the nature and types of reading, and its place in the curriculum, outlines a comprehensive reading program extending from the kindergarten to the university and considers numerous specific teaching problems in relation to reading.

466. TILLEY, HARVEY C. "A Technique for Determining the Relative Difficulty of Word Meanings among Elementary School Children," *Journal of Experimental Education*, V (September, 1936), 61–64.

Summarizes data secured from several hundred children in Grades III, V, and VII through the use of multiple-choice and self-appraisal types of tests to determine the relative difficulty of word meanings when the words are presented both in isolation and in context.

467. TINKER, MILES A. "Eye Movements in Reading," *Journal of Educational Research*, XXX (December, 1936), 241–77.

Presents a detailed summary of published researches related to eye-movements in reading.

468. WAGNER, GUY W. "The Maturation of Certain Visual Functions and the Relationship between These Functions and Success in Reading and Arithmetic," *Studies in Psychology of Reading*, I, 108–46. University of Iowa Studies in Psychology, No. 21. Psychological Monographs, Vol. XLVIII, No. 3. Princeton, New Jersey: Psychological Review Co., 1937.

Summarizes the results of the Betts Ready To Read Tests of fusion, amplitude of fusion, lateral imbalance, visual acuity, and stereopsis given to approximately 850 pupils in the kindergarten and Grades I–VI, inclusive, of the Syracuse, New York, public schools.

469. *We Learn English.* A Preliminary Report of the Achievement of Spanish-speaking Pupils in New Mexico. Albuquerque, New Mexico: San Jose Experimental School, University of New Mexico, 1936. Pp. 34+61 tables.

Summarizes the results of a five-year experiment with Spanish-American children to improve the efficiency and appropriateness of the instruction provided, with special emphasis on reading and speaking English.

470. WITTY, PAUL A., and KOPEL, DAVID. "Studies of Eye-Muscle Imbalance and Poor Fusion in Reading Disability: An Evaluation," *Journal of Educational Psychology*, XXVII (December, 1936), 663–71.

Reviews the findings of various investigations to determine the relation of eye-muscle imbalance and poor fusion to reading disability.

471. WRIGHTSTONE, J. WAYNE. "Diagnosing Reading Skills and Abilities in the Elementary Schools," *Educational Method*, XVI (February, 1937), 248–54.

Presents a suggested list of diagnostic instruments relating to skills and abilities in reading and describes a class project in remedial reading.

472. ZEHRER, FREDERICK A. "Methods of Remedial Reading Instruction at the High-School Level," *Harvard Teachers Record*, VI (June, 1936), 154–62.

Presents a series of practical suggestions for overcoming reading deficiencies and describes books and compiled exercises which supply excellent practice material for retarded readers.

ENGLISH[1]

R. L. LYMAN

473. BARNES, WALTER. "Language as Social Behavior," *Educational Method*, XVI (March, 1937), 275–88.

Throws light on certain concepts of language which have dominated American schools and analyzes a concept of language as social behavior, which seems more complete and satisfying.

474. CASTEEL, JOHN L. "The Influence of the Audience in Oral Composition," *English Journal*, XXV (January, 1936), 58–61.

Explains that the teaching of oral composition calls for an understanding of how to aid the pupil in making effective adjustments and in achieving self-control, poise, and emotional release.

475. COTNER, EDNA. "English in the Integrated Program," *Elementary English Review*, XIV (February, 1937), 52–54.

Presents practical problems in correlating English composition, literature, social studies, and phases of music and art.

476. CUTRIGHT, PRUDENCE. "The Problem of Grade Placement," *Proceedings of the National Education Association*, LXXIII (1935), 630–31.

Discusses the increasing tendency on the part of committees in the field of English composition to produce ungraded courses of study.

477. DAWSON, MILDRED A. "Recent Language Textbooks," *Elementary English Review*, XIV (March, 1937), 89–95.

Analysis of recent textbooks in language for Grade VI reveals that the authors have emphasized the following progressive tendencies: functional centers, repetition, socialized procedures, and cumulative standards. They have neglected spelling, enrichment for superior pupils, nonfunctional grammar, and inventories of expressional needs.

478. DYER, HENRY S. "Drill and Creative Work in Language Expression," *Elementary English Review*, XIII (November, 1936), 263–68.

[1] See also Item 389 (Dawson) in the list of selected references appearing in the September, 1937, number of the *Elementary School Journal*.

Sets forth three general principles: (1) that creative work should precede drill work in emphasis and practice, (2) that the English habits which free the mind for creative work must be secured through intensive and extensive drill, and (3) that drill work should be adapted to individual needs.

479. FALK, ETHEL MABIE. "Adjustment through English Expression," *English Journal*, XXVI (May, 1937), 381–88.

Discusses the importance, in the teaching of English, of considering the language characteristics of individuals and lists eight probable types of pupils.

480. FRIES, CHARLES C. "First Steps in a Workable Program of Teaching the English Language," *English Journal*, XXV (February, 1936), 150.

Makes a plea for definite objectives and for the stimulation among pupils of habits of observation of actual usage.

481. FRISTOE, DEWEY. "The Teaching of Language in the One-Room Country School," *Elementary English Review*, XIV (February, 1937), 35–41.

Discusses research which reveals that the teaching of language in one-room rural schools is inferior to that given in graded schools and points out difficulties peculiar to language instruction under three classifications: (1) instruction, (2) correlation, and (3) community attitude.

482. GILLETT, NORMA. "A Correlated Curriculum in Composition and the Social Studies," *Elementary English Review*, XIV (March, 1937), 80–86.

Reports a study in Grade III of the University Elementary School, University of Iowa, to evaluate in terms of results a program in which composition was correlated with a study of pioneer life.

483. GREENE, HARRY A. "Principles of Method in Elementary English Composition," *Elementary English Review*, XIV (March, 1937), 103–9.

Summary of the Fifth Annual Research Bulletin of the National Conference on Research in Elementary School English, giving bibliography of recent studies in the field.

484. JOHNSON, M. IRENE. "The Radio in Teaching Fifth and Sixth Grade English," *Elementary English Review*, XIV (January, 1937), 25–27, 32.

Reports procedures found to be desirable in utilizing radio programs in elementary English classes.

485. JOHNSON, ROY IVAN. "The State of the Language Reconsidered," *Elementary English Review*, XIV (March, 1937), 77–79, 95.

Presents arguments to support the acceptance of change in our language in response to recent pleas for the *status quo* in English.

486. LEARY, GENEVIEVE M. "Free Compositions as an Aid to the Teacher in Child Guidance," *Journal of Experimental Education*, V (September, 1936), 26–29.

Reports a study in twelve elementary classrooms in three laboratory schools of New Haven, Connecticut, which shows how free compositions of children may be used by teachers in child guidance.

487. McKee, Paul. "Seven Matters of Importance in the Teaching of Language," *Education*, LVII (February, 1937), 356–59.

Presents points on teaching language as gained through a study of modern textbooks, courses of study, and work in classrooms. Stresses the need for revising of textbooks to include all language activities which have significance for the child and for the persistent use of good English in all school activities.

488. Meade, Richard A. "Literature in the Virginia Course," *English Journal*, XXVI (April, 1937), 302–7.

Describes the tentative course of study in literature for Grade VIII of Virginia's public schools—a functional organization of literary materials.

489. Phillips, Delight. "A Unit on the Use of Radio," *English Journal*, XXVI (January, 1937), 33–38.

Describes the careful use of radio around one unit in an eighth-grade English class.

490. Pooley, Robert C. "The Levels of Language," *Educational Method*, XVI (March, 1937), 289–98.

Discusses: (1) six levels or areas of language: (*a*) illiterate level, (*b*) the homely level, (*c*) the informal-standard level, (*d*) the formal-standard level, (*e*) the literary level, and (*f*) the technical level; (2) the application of levels of English usage to the teaching of English; and (3) examples of successful teaching of language.

491. Shankle, George E. "Why Teach English Grammar," *Education*, LVII (December, 1936), 233–35.

Contends that "mastery of the basic principles of English grammar is just as essential to the student of English as an intellectual command of the laws and fundamental principles of chemistry, physics, biology, or of the other sciences is necessary to the scientist."

492. Storm, Grace E. "Social Studies, a Basis for English," *Elementary English Review*, XIV (February, 1937), 42–44.

Discusses the correlation between social studies and English, showing that emphasis on the expressional aspects of the social studies adds stimulation and vitality to the English classes.

493. Watson, E. H. A. "Good English the Responsibility of All Teachers," *School*, XXIV (February, 1936), 469–73.

A discussion based on research from French schools, American schools, and Canadian schools, showing how composition-teaching limited to English classes develops a composition awareness or complex that functions only during those classes instead of establishing habits of good English which function in other classes and outside of school.

494. Zyve, Claire Turner. "English—an Integral Part of All School Activities," *Elementary English Review*, XIV (February, 1937), 49–51.

Discusses the need for giving attention in English composition to pupils' own experiences and for providing opportunities for pupils to do independent work in English.

SPELLING

FREDERICK S. BREED

495. ASHBAUGH, E. J. "An Unsolved Problem in Spelling," *Elementary English Review*, XIV (January, 1937), 17, 24.

Raises the question: What makes a word difficult to learn? A spelling scale indicates percentages of correct spellings, but "we know . . . . nothing from that fact regarding the difficulty of learning." Perhaps the author would approve an experimental method of determining the difficulty of words similar to that used by Knight and his co-workers in determining the difficulty of primary number combinations.

496. BELLEAU, WILFRID E. "A Two-Year Experiment in Spelling," *Catholic School Journal*, XXXVI (October, 1936), 280.

Describes a program which was designed to overcome spelling deficiencies in Grades VII, VIII, and IX and which consisted of regular instruction as organized in a nationally known spelling book. The average percentage of spelling error is reported to have been reduced from 20 to 6.

497. BHATIA, H. R. *Suggestions for the Teaching of English Spelling in India.* Teaching in India Series, VII. Bombay: Oxford University Press, 1936. Pp. 90.

"This is essentially a handbook for teachers," dealing with the psychology and the teaching of spelling. Aside from those of Rice and Cornman, it shows limited acquaintance with the contributions of American investigators and makes no use of the results of objective studies of the writing vocabulary.

498. BREED, FREDERICK S. "Generalization in Spelling," *Elementary School Journal*, XXXVII (June, 1937), 733–41.

An attempt, in the light of the experiments to date, to indicate the value of generalization in spelling. Concludes that the principle will probably be given somewhat greater recognition in the near future. A bibliography of thirty-nine references is provided.

499. FORAN, T. G. "Basic Psychology and Techniques in Spelling," *Education*, LVII (February, 1937), 364–66.

A brief statement of fundamental principles of instruction in spelling.

500. GARRISON, KARL C. "The High School Spelling Vocabulary," *High School Journal*, XIX (May, 1936), 147–50, 172.

Presents a list of 155 words called the "North Carolina High School Spelling Demons." More detailed information should be given in regard to the method used in the selection of the list.

501. GATES, ARTHUR I. *A List of Spelling Difficulties in 3876 Words.* New York: Teachers College, Columbia University, 1937. Pp. 166.

Shows the average gradation of each of 3,876 words of highest frequency in twenty-five spelling textbooks and courses of study, the percentage of comprehension of the words at different grade levels, and the part or parts of special difficulty, if any, in each word.

502. GATES, ARTHUR I. "Recent Experimental Attacks upon Certain Spelling Problems," *Elementary English Review*, XIV (January, 1937), 6–10.

In the light of recent findings, the author discusses the gradation of words, the principle of generalization, word-list versus word-study programs, the possibility of reducing the amount of formal instruction, and points of special difficulty in words.

503. GILLINGHAM, ANNA, and STILLMAN, BESSIE W. *Remedial Work for Reading, Spelling and Penmanship*. New York: Sackett & Wilhelms Lithographing Co., 1936 (revised). Pp. 170.

Discusses certain fundamental types of disability in phonetic spelling, cites illustrative cases, and indicates major weaknesses to be looked for. In cases of difficulty in nonphonetic spelling, the remedial procedures recommended have much in common with the study procedures employed in the best curriculums except that they give more emphasis to generalization, including the use of rules.

504. HIGLEY, BERNARD R., and HIGLEY, BERNICE M. "An Effective Method of Learning To Spell," *Educational Research Bulletin*, XV (December 16, 1936), 235–42.

An experimental study of learning to spell "by visual perception." In principle, the method avoids analysis, relies on learning by wholes, and is allied with the idea that spelling can be mastered incidentally in reading. Letter marks and examination scores are reported as favoring the method in two experimental classes. Both the value of visual perception and the value of analysis have been demonstrated in previous experiments. The important question is: Should the first be employed to the exclusion of the second?

505. HORN, ERNEST. "The Incidental Teaching of Spelling," *Elementary English Review*, XIV (January, 1937), 3–5, 21.

Contends that, if spelling is taught incidentally in connection with English composition, the course "should be planned, first, to deal with those situations in which children most frequently need to write and, second, to insure growth through these situations . . . . to the point where children can write efficiently in the common and important situations that demand writing in adult life."

506. LOGAN, CONRAD T. "Standards of Pronunciation and Spelling about the Time of the American Revolution," *Virginia Teacher*, XVII (November, 1936), 176–79.

Provides some interesting items on American departures from British orthography that are attributable to Noah Webster.

507. LOGAN, CONRAD T. "Noah Webster's Influence on American Spelling," *Elementary English Review*, XIV (January, 1937), 18–21.

Describes Noah Webster's intense interest in spelling reform and indicates American departures from British orthography for which he was largely responsible through his *American Dictionary of the English Language* (1828).

508. MORRIS, J. ALLEN. "An Individualized Flexible Speller," *Industrial Arts and Vocational Education*, XXVI (February, 1937), 44–49.

An attempt to solve the problem of spelling deficiency in a vocational school, which has much in common with numerous attempts to solve a similar problem in secondary schools. A list of eighteen hundred words was "gathered by putting each boy's mistakes on a separate sheet." One wonders why writing vocabularies more accurately representative of common needs were not consulted in the selection.

509. MURRAY, GILBERT. "The Spelling of English," *Living Age*, CCCLII (April, 1937), 110–12.

That English spelling is due for a "spring cleaning" is the opinion of the author, president of the Simplified Spelling Society. Language changes, but the symbols claim a perpetual lease of life. This fact is unfortunate when the orthography that sets the style is as ingenious as that of King John, who performed the feat of spelling the word "usage" without a single letter employed today: "yowzitch."

510. STAATS, PAULINE G. "Solving a Problem—An Experiment in Making a Word Book," *Childhood Education*, XIII (February, 1937), 274–76.

A "progressive" teacher meets the need for dictionaries during the creative-writing period in Grade III by selecting a vocabulary from word lists for Grades I–VI and making a word book that works.

511. STEADMAN, J. M., JR. "Linguistic Cowardice and Verbal Timidities," *English Journal* (College Edition), XXV (September, 1936), 573–88.

"This article presents some of the results obtained by an experiment conducted over a period of about ten years and throws light upon three types of verbal taboos." Words that are avoided because of uncertainty regarding spelling, meaning, or pronunciation are presented in separate lists; some of the causes of avoidance are indicated; and suggestions for the removal of the taboos are offered.

512. WOODY, CLIFFORD. "Five Questions about Spelling," *University of Michigan School of Education Bulletin*, VIII (April, 1937), 99–101.

Answers "several of the questions most frequently asked with regard to the teaching of spelling." The questions relate to formal spelling in Grade I, the proper source of words, the value of syllabication, and the use of phonics.

HANDWRITING[1]

FRANK N. FREEMAN

513. BEATTY, WILLARD W. "Manuscript Writing: An Effective Tool for Adult Life," *Nation's Schools*, XVIII (September, 1936), 30–32.

[1] Item 503 (Gillingham and Stillman) in this list is also pertinent for handwriting. It gives types of cases emphasizing lack of lateral dominance and development of kinesthetic control. See also Item 403 (Washburne and Morphett) in the list of selected references appearing in the September, 1937, number of the *Elementary School Journal*.

Describes experience in Bronxville schools to support the view that manuscript writing is superior for adults as well as for children.

514. BORAAS, HAROLD O. "An Experimental Study of the Relative Merits of Certain Written Letter Forms with Respect to Legibility, with Speed and Stability as Related Factors," *Journal of Experimental Education*, V (September, 1936), 65–70.

An experimental comparison of variants of certain letter forms.

515. COLE, LUELLA. "A Successful Experiment in the Teaching of Handwriting by Analytic Methods," *Journal of Psychology*, I (1935–36), 209–22.

Reports the gain from diagnosis of faults of particular letters and practice on the same letters.

516. DROHAN, G. "Extent of the Use of Manuscript Writing or Print-Script," *Elementary English Review*, XIII (December, 1936), 287–90.

The report of the returns of a questionnaire with a good bibliography.

517. HILDRETH, GERTRUDE. "Copying Manuscript and Cursive Writing," *Childhood Education*, XIII (November, 1936), 127–28, 142.

Found that a kindergarten class copied manuscript writing much more readily than cursive writing.

518. HOUSTON, HARRY. "Planning Handwriting Instruction," *Childhood Education*, XIII (November, 1936), 123–26, 137.

A sketch of methods in beginning handwriting by the supervisor of writing at New Haven, Connecticut.

519. ROMAN, K. G. "Studies on the Variability of Handwriting, the Development of Writing Speed and Point Pressure in School Children," *Pedagogical Seminary and Journal of Genetic Psychology*, XLIX (September, 1936), 139–60.

Gives the distribution and averages for ages eleven to eighteen and discusses special cases, such as stutterers and those with retarded puberty.

520. SCHEIDEMANN, NORMA V. "Inverse Writing: A Case of Consistent Mirror Writing," *Pedagogical Seminary and Journal of Genetic Psychology*, XLVIII (June, 1936), 489–94.

The treatment of a case of a right-handed child who reversed copy presented on a horizontal plane and inverted copy presented on a vertical plane.

521. STONE, ALA M., and SMALLEY, ETHEL IRWIN. "After Manuscript, What Next?" *Progressive Education*, XIV (February, 1937), 91–94.

Discusses the introduction of joinings into manuscript writing.

522. TOMPKINS, HARRIET D. "How Manuscript Writing Helped Tom," *Childhood Education*, XIII (November, 1936), 129–31.

Effect of manuscript writing on a post-encephalytic boy.

THE SOCIAL SCIENCES[1]

R. M. TRYON

In the compilation of the material for this division of the list of selected references, the assumption has been that the material which has appeared during the past year in *Social Studies* and *Social Education* is well enough known to justify omitting it. Furthermore, to have included it would have necessitated omitting much fugitive material that requires considerable time to locate.

523. BAGLEY, WILLIAM C., and ALEXANDER, THOMAS. *The Teacher of the Social Studies*. Report of the Commission on the Social Studies of the American Historical Association, Part XIV. New York: Charles Scribner's Sons, 1937. Pp. xiv+330.

A volume devoted primarily to the professional aspects of the selection and the education of teachers of the social sciences in the United States and in Europe. An appendix of forty-seven pages contains material on personal qualities essential in a superior teacher of the social sciences.

524. BISCOE, WILLIAM. "The Real Task of the Social Studies: An Experience," *Progressive Education*, XIII (December, 1936), 613–16.

Cites an actual experience to show the real task of the social sciences—that of giving the child "constant practice" in relating the past to his own problems.

525. BROWN, WILLIAM B. "Method and the New Social Studies Curriculum," *Educational Method*, XVI (December, 1936), 109–12.

A discussion of three general principles to follow in seeking a more effective classroom teaching of the social sciences.

526. CULP, V. H. "Activities in the Social Studies for Middle and Upper Grades," *Instructor*, XLVI (February, 1937), 25, 70.

In praise of an activity program in the teaching of social-science materials. Lists forty suggestive activities.

527. EMERY, JAMES NEWELL. "Do You Hate History?" *Journal of Education*, CXIX (November 2, 1936), 476–78.

Offers remedies for making history more interesting and worth while to both teacher and pupil.

528. FLORIDA ELEMENTARY SCHOOLS. "Social Studies in Grade Three," *American Childhood*, XXII (November, 1936), 16–17, 51–52.

A suggested program of work for Grade III. Outlines activities involving social-science materials.

[1] See also Items 201 (Reed) and 204 in the list of selected references appearing in the April, 1937, number of the *Elementary School Journal*, Item 418 (Kelty) in the September, 1937, number, and Item 482 (Gillett) in this list.

529. FLORIDA STATE CURRICULUM REVISION. "Social Studies and the Young Child," *American Childhood*, XXII (September, 1936), 12–13, 47.

Suggested activities for use in Grade I. Explains how to lay the basis for important understandings in the social-science field.

530. GONZAGA, SISTER LEO. "Reading for the Social Studies," *Catholic School Journal*, XXXVII (April, 1937), 115.

Emphasizes the importance of intelligent reading for success in the social sciences and the necessity for the teacher to initiate pupils into the new vocabulary of that field.

531. GREENLEAF, DOROTHY. "Personality Development through the Social Studies," *Childhood Education*, XIII (October, 1936), 67–70.

A stimulating discussion of criteria for selecting the content of the social sciences in the primary grades.

532. HARPER, C. A. "Skills as Outcomes of Teaching the Social Studies," *School and Society*, XLV (January 2, 1937), 20–22.

Lists and discusses eleven important skills to be gained through the teaching of the social sciences.

533. HARPER, C. A. "Paradoxes in Social-Studies Instruction," *Elementary School Journal*, XXXVII (April, 1937), 601–7.

Lists and briefly discusses ten so-called "paradoxes" which the author has noted while visiting teachers engaged in teaching the social sciences.

534. HORN, ERNEST. *Methods of Instruction in the Social Studies*. Report of the Commission on the Social Studies of the American Historical Association, Part XV. New York: Charles Scribner's Sons, 1937. Pp. xx+524.

Contains twelve chapters on various aspects of methods of instruction in the social sciences. Oral instruction, visual aids, the textbook and collateral reading, and reading in relation to learning in the social sciences are treated with considerable fulness.

535. RICHARDS, RUBY C. "Social Science Review Project," *Grade Teacher*, LIV (November, 1936), 41, 81.

An account of the units of work covered by two social-science classes during the school year.

536. ROSS, EARLE D. "History Teaches—How, What?" *Midland Schools*, LI (March, 1937), 222–23.

Discusses the abuses to history. Argues that history teaches "plenty" for those who will learn.

537. SAUNDERS, ELSA S. "Fusion of Art and Social Studies," *Instructor*, XLVI (April, 1937), 20, 65.

Points out the benefits to be derived through a correlation of art and the so-called "social studies."

538. SCHMIDT, LOUIS BERNARD. "The Meaning and Function of History," *Midland Schools*, LI (March, 1937), 234–35.

Discusses the guiding principles to be possessed by pupils and teachers of history for the proper functioning of the subject in education for citizenship.

539. WESLEY, EDGAR BRUCE. *Teaching the Social Studies*. New York: D. C. Heath & Co., 1937. Pp. xviii+636.

Purports to be a new synthesis of contemporary knowledge concerning the teaching of the social sciences in elementary and high schools. Much emphasis on curriculum, method, and measurement.

GEOGRAPHY[1]

EDITH P. PARKER

The following list was derived from a canvass of material published since August 1, 1936. It includes those publications which seem to be the more helpful, significant contributions. Some articles were excluded because of their brevity and because of the fact that they duplicated, in essence, longer treatments included.

540. AITKEN, W. E. M. "Geography for Grades V–VIII," *School* (Elementary Edition), XXIV (September, 1935–June, 1936), 33–38, 122–26, 209–13, 303–6, 397–401, 490–94, 582–86, 672–76, 766–70, 856–58; XXV (September, 1936–June, 1937), 25–29, 128–32, 213–16, 306–9, 400–404, 494–98, 579–83, 675–81, 772–76, 859–62.

Makes specific suggestions for work in geography month by month.

541. EISEN, EDNA E. "Making the Teaching of Geography Effective," *Journal of Geography*, XXXVI (April, 1937), 132–39.

Cites the importance for effective teaching of concreteness, of the interpretation of real situations, and of experiences which develop tool-using abilities. Includes an illustrative unit on rubber.

542. HAHN, H. H. "Why Failures in the Study of Geography?" *Journal of Geography*, XXXV (September, 1936), 225–34.

Discusses nine common causes of such failure.

543. HARTSHORNE, RICHARD. "Geography for What?" *Social Education*, I (March, 1937), 166–72.

Evaluates curriculum trends in geography.

544. HOOPER, A. G. "Illustrative Material for Geography Classes," *School* (Elementary Edition), XXV (September, 1936), 57–60.

Lists available illustrative materials.

[1] See also Item 119 (Sorenson) in the list of selected references appearing in the February, 1937, number of the *School Review*.

545. KIERAN, SISTER MARY. "Vitalized Teaching of Geography," *Catholic School Journal*, XXXVI (November, 1936), 289–95.

Summarizes purposes, methods, and various phases of the subject matter of geography. Includes bibliography.

546. NATIONAL COUNCIL OF GEOGRAPHY TEACHERS. "Geography in the Elementary and Secondary Curricula," *Journal of Geography*, XXXVI (April, 1937), 154–58.

States the contributions of geography to an understanding and solution of many human-welfare problems.

547. PARKER, EDITH P. "Geography in the Elementary and the Junior High School," *International Understanding through the Public-School Curriculum*, pp. 127–34. Thirty-sixth Yearbook of the National Society for the Study of Education, Part II. Bloomington, Illinois: Public School Publishing Co., 1937.

Stresses the significance of sound geographic training in contributing to international understanding.

548. STADTLANDER, ELIZABETH. "An Experiment in Individual versus Group Study of Pictures in Geography," *Journal of Geography*, XXXV (December, 1936), 360–64.

Gives an analytical account of an experiment conducted in a fifth-grade geography class.

549. STULL, DE FOREST. "Geography in the Social Studies Program," *Elements of the Social Studies Program*, pp. 68–86. Sixth Yearbook of the National Council for the Social Studies. Philadelphia: McKinley Publishing Co., 1936.

Discusses the relations of geography to other fields, objectives of work in geography, and a course of study.

550. UTTLEY, MARGUERITE. "Guide Sheets in Geography," *Midland Schools*, LI (February, 1937), 204–6.

Emphasizes the value of guide sheets in directing individual study in geography. Includes illustrative guide sheets.

551. WHITTLESEY, DERWENT. "Geography," *International Understanding through the Public-School Curriculum*, pp. 119–25. Thirty-sixth Yearbook of the National Society for the Study of Education, Part II. Bloomington, Illinois: Public School Publishing Co., 1937.

Shows, with numerous concrete illustrations, the bearing of geographic knowledge on one's attitudes toward, and understanding of, other peoples.

Educational Writings

REVIEWS AND BOOK NOTES

The place of education in state and regional planning.—The appointment of the National Resources Committee in Washington, together with the establishment of state planning boards and regional planning agencies, provides a new channel for co-ordinating action intended to conserve our natural resources and for attacking the problems inherent in the progress of our social institutions. A recent report[1] of the programs and the accomplishments of the planning boards concerns educators, not alone as citizens rightly interested in these vital matters, but as specialists who are ultimately charged with the responsibility for operating an adequate program of education.

Forty-seven states (all except Delaware), four regions, Puerto Rico, and the District of Columbia have planning boards. The scope of state and regional planning as conceived by the planning boards can be observed by the titles of the various subjects which are treated in their reports. The thirty-one subjects reported on by more than one of the state and regional boards and the number of times each topic is mentioned are: water resources, 51; recreation parks and centers, 38; education, 37; land utilization, 33; public health, 31; transportation, 31; publicity programs, 28; co-operation with the Public Works Administration, 28; industrial research, 28; forest resources, 24; studies in governmental structure, 24; city and county zoning, 24; highways, 24; population surveys, 21; mineral resources, 20; soil resources, 19; traffic studies, 19; wild-life resources, 18; public lands, 18; water-power resources, 18; agricultural research, 18; public finance, 18; flood control, 17; land tenure and taxation, 16; prisons and insane asylums, 14; road surveys, 12; mining, 9; manufacturing, 8; irrigation, 7; fishing industry, 5; and rural electrification, 4.

Any reference to education, no matter how slight, has been included in the foregoing analysis. No mention of education is made in the Foreword of the publication. The reports of thirty-four states, the District of Columbia, and two regions (St. Louis and Ohio Valley) mention education. The reports indicate, however, that only eighteen states and the St. Louis Region actively planned for a specific study of one or more phases of education. The phases of education which are receiving some detailed treatment and the number of times

[1] National Resources Committee, *State Planning: Programs and Accomplishments.* Washington: United States Government Printing Office, 1937. Pp. viii+128. $0.25.

each is mentioned are: formulation of educational program, 8; study of the physical plants, 7; financing of schools, 6; school population concentration, 6; general survey of public schools, 5; administration of schools, 5; study of rural schools, 4; survey of secondary schools, 3; consolidation of districts, 3; mapping of school districts, 2; construction of schools, 2; illiteracy, 1; higher education, 1; and curriculum, 1.

The pressing problems of education vary within states and regions. However, there is little in the reports to indicate a comprehensive understanding of, or an attack on, the general problem of education in most of the states and regions. To a great extent this lack is accounted for by the personnel of the boards. Because the occupations of the board members are not stated in all the reports, no satisfactory study can be made of their qualifications for dealing with the problems of education. However, the state superintendent or director of education is a member of the state planning board in only eleven states. In a few states the president or a professor of the state university or of some college within the state is a member of the board. In the main, educational specialists are not included in the membership of the planning boards.

The inclusion of the state school superintendent on the planning board is not uniformly meaningful so far as the consideration which education has received by the boards is concerned. The reports of the eleven states in which the state superintendent of education is a member of the planning board show that six of these states include a definite plan for one or more phases of education. Of the remaining five state reports, three mention education as one of several general studies and the other two make no definite reference to education.

It is not likely that educational specialists will be added to the appointed membership of the planning boards, as desirable and necessary as such additions would seem. The next best move appears to be the drafting of a comprehensive statement of the problems of education to be placed before the existing boards as guiding principles. Such a statement is being prepared by the Educational Policies Commission of the National Education Association and the American Association of School Administrators. When their report is completed, it should prove of interest to all educators. The future reports of the planning boards will disclose to what extent this type of professional guidance is accepted by the planning boards.

ROBERT C. WOELLNER

Practical problems of the teacher.—Despite marked improvement in the means for studying educational problems and despite increased facilities for disseminating professional information, many workers in the field feel that research and training centers provide unjustifiably meager assistance in solving problems regularly encountered in teaching. An impression exists that educational literature is frequently concerned with generalities so remote from actual experience or so difficult of realization as to deal with a different educational world from that in which public-school administrators and teachers serve. While potent forces

are undoubtedly lessening the gap between existing professional knowledge and actual practice, field workers will have to assume an increasing share of the responsibility of seeing that this gap narrows. They should develop techniques for putting educational principles into effect and should publish the results in terms easily comprehended by the average teacher. An effort in this direction is indicated by the publication of a book[1] dealing with aspects of school management essential to successful teaching, which is written by men with extensive administrative experience in public schools.

As a personal and realistic touch, problems of teaching are presented and discussed as informal conversations between a hypothetical dean of education at a state teachers' college and a niece living at his house while preparing for teaching. The conversations cover twenty-three problems, classified under the following "unit" headings: "Training for Teaching," "The Teaching Position," "The School and the Community," "The School Plant," "The School Curriculum and Program," "Health Management," "The Individual Child," "School Accounting," "School Government," and "The Teacher." Each unit is introduced by a short pretest and is followed by a list of "Questions and Projects." A foreword, a brief introduction, and a bibliography of the references used precede the main content of the book.

Advantages of the device of centering discussion in the personalities of the dean and his niece are that it permits the expression of attitudes and reactions not easily introduced in more conventional forms of presentation and that, although the dialogue is stilted at times, it provides a flavor of idealism too rarely encountered in current considerations of educational problems. Evidences are numerous not only that the authors possess mature firsthand acquaintance with problems of teaching in communities of various types but that they have subjected their experiences to critical analysis. They frequently go beneath the surface conventionally covered by educational writers and bring to light aspects fundamentally affecting the solution of serious problems. An example is afforded in the discussion of the problem of training for citizenship. Attention is directed in this passage not only to the influence of personal or gang loyalties harbored by pupils but also to the frequent difficulties of teachers in making distinctions between legitimate and spurious pupil loyalties which gravely affect training for citizenship. Discussions of the necessity for effective records and reports, the responsibilities of the teacher with respect to lunch and recreation periods, and the need for developing community co-operation are especially timely.

Until adequate emphasis is placed on the necessity for conscious and systematic application of basic principles on the part of teachers in the solution of educational problems, teachers will be confused by a great mass of practices to be remembered and teaching will tend to be performed on a job basis rather than on a professional basis. This element is essential to a comprehensive program of

[1] Hugh C. Moeller, O. Stuart Hamer, and Fred C. Bowersox, *Personal Problems in School Management.* New York: Newson & Co., 1936. Pp. 384. $1.60.

teacher training; emphasis on it, in the judgment of the reviewer, would have added measurably to the effectiveness of this book.

This publication presents, in concrete and convincing form, materials on problems of school management vital to both prospective and present teachers. It should find use as a textbook in teachers' colleges and in-service training courses. Administrators also should find it especially helpful in developing desirable teacher attitudes toward extra-instructional responsibilities.

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WELLS HIGH SCHOOL
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First aids for research workers.—Within the past two decades several books bearing on the various aspects of educational research have appeared. Some have emphasized statistical methods and have devoted little or no discussion to the specific conditions governing the definition of a problem or the interpretation of the data obtained. Some have stressed measurements and the method of constructing measuring instruments, so useful in research work. Others set forth in rather vivid fashion the principles of how to experiment, outlining the proper experimental controls and techniques. Each volume confines itself largely to a single aspect of research. Other recent books, under such titles as *How To Do Research in Education, The Art of Educational Research, Research and Thesis Writing*, or *The Methodology of Educational Research*, attempt to present in rather abbreviated fashion a unified discussion involving many, if not all, of the techniques employed in research. Naturally the treatment given to the various techniques is unsatisfactory to the experienced research worker.

The volume under review[1] is a most ambitious effort to present the application of all these techniques to the study of educational problems. The authors discuss such topics as "Educational Problems and Their Definition," "Collecting the Data Specified by a Problem—Basic Techniques," "Elementary Techniques for Handling Data," "The Faults of Data and Their Effects," "Studying the Past in Education," "Constructing Measuring Instruments," "Studying Current Conditions or Practices," "Studying the Effect of a Specified Change in a Given Cause," "Studying Problems of Prediction," "Identifying and Studying Cause and Effect Relationships," "Determining What Should Be," "Evaluating and Synthesizing Educational Research," and "Progress toward a Science of Education." Students of educational research will recognize that these titles head chapters giving discussions of such familiar topics as statistical, experimental, historical, and philosophical methods.

However, it should be said that the treatment of Monroe and Engelhart is different from that of other authors in this field. Under each topic discussed experimental studies illustrating the technique under consideration are presented. While the discussion under each topic may be somewhat too brief for

[1] Walter S. Monroe and Max D. Engelhart, *The Scientific Study of Educational Problems*. New York: Macmillan Co., 1936. Pp. xvi+504. $3.00.

those of little experience in research work, reference to the numerous investigations cited will give understanding of the technique at hand. The bibliography at the close of each chapter should prove especially helpful in furthering the comprehension of the technique presented. This volume is rather unique in devoting each of several chapters to the discussion of a general type of research problem. Sample problems for investigation are cited, and the principles of appropriate methods of investigation are discussed. After perusal of the chapters dealing with appropriate methods and with faults prevailing in the current investigations, a student should be able to take proper precautions in his own research activities. He should profit also from the numerous specific suggestions for short cuts and economies facilitating the application of the various techniques. Another contribution of this volume is the discussion of several aspects of statistical methods and concepts, such as the variance ratio, Spearman's *g* factor, or Thurstone's factor analysis usually found in treatments of educational statistics. The emphasis on the concept of "dependability" and on the cause-and-effect relationship seems to the writer to be especially significant.

The book as a whole is really a first aid to research workers. Since the range in difficulty of the materials presented is very great, it is probable that the volume will prove most valuable to the experienced research worker. The common-sense discussions running throughout the various chapters can be understood by the novice in research, but the more involved treatments of statistical formulas may baffle him. He may consider too limited the space devoted to some aspects of research techniques, but he certainly will be made aware, through the reading of this book, of the need for the application of truly scientific techniques in educational investigations. The book presents a real challenge to those interested in the scientific study of education.

CLIFFORD WOODY

UNIVERSITY OF MICHIGAN

Evaluation of a health program.—The research reported by Hardy and Hoefer in *Healthy Growth*[1] is unique in the literature of health education, representing, as it does, a thorough and scientific attempt to measure the effects of a health program. In contrast with its scope and elaborate statistical treatment of the data, the previously published descriptions of health programs appear obviously inadequate in their feeble evaluation based only on subjective opinion or quantitative study of one or two outcomes. Health educators have long recognized the need for experimental work in a natural school stituation but have been deterred, perhaps, by the difficulty and the complexity of the problem.

The Hardy and Hoefer investigation is also allied to the growth studies being made at Harvard University, the University of Iowa, and the University of California, insofar as they all use the techniques of longitudinal research applied to child development.

[1] Martha Crumpton Hardy and Carolyn H. Hoefer, *Healthy Growth: A Study of the Influence of Health Education on Growth and Development of School Children.* Chicago: University of Chicago Press, 1936. Pp. xii+360. $3.50.

The introductory chapter of *Healthy Growth* outlines the general plan of the investigation. It is presented as a longitudinal, control-group experiment beginning in Grade III and extending over twelve years. More than two hundred pages of quantitative and qualitative data were collected for each of the 409 children studied.

In the next eight chapters description and discussion of methodology occupy a prominent place. Then follows a statistical comparison of the three groups: the experimental group, which followed a complete health program; a group that did not receive health instruction; and a group that had limited contact with all phases of the program. These groups are compared with respect to a large number of physical and psychological items. This treatment of the total number of cases in each group is followed by further pairing of cases and statistical treatment of the data.

Among the multiplicity of specific results reported, the improved physical condition of the children in the experimental group stands out most unequivocally. The pupils who had participated in the entire health program were superior to the control pupils in general physical condition, nutritional rating, firmness of muscle, posture, muscular strength and vigor, and number of defects corrected. This superiority of the experimental group, however, cannot be attributed to the classroom health instruction alone. It is a resultant, as well, of the other features of the program and, to some extent, of the special characteristics of the groups.

In the last three chapters the authors summarize, interpret, and present new relationships among the data collected over the period of twelve years.

Even though conclusive evidence of the effectiveness of the health instruction was not secured, this research has made an invaluable contribution by developing more precise methods of measurement than have before been used, by analyzing the process of appraisal of children's health, and by frankly calling attention to sources of error in the experimental technique. It has emphasized the importance of setting up, in the beginning if possible, groups which are comparable with respect to the factors that are most likely to influence the physical development and educability of the pupils.

The fullest possibilities of the original data are still unexhausted. If the wealth of data collected were reassembled as case studies, individual growth curves could be plotted and individual patterns of health behavior and status could be studied with reference to the associated environmental conditions.

RUTH STRANG

TEACHERS COLLEGE, COLUMBIA UNIVERSITY

New answers to old questions.—For many years authors have been writing material in the field of sex education which parents might use when the children asked questions about sex. This book[1] is the first to present for the children

[1] Frances Bruce Strain, *Being Born.* New York: D. Appleton-Century Co., Inc., 1936. Pp. 144. $1.50.

themselves the answers to the questions which they usually ask with regard to birth, physical development, marriage, and mating.

The author states that children are interested in the origin of life, in themselves as human beings, not in sex. The book, written from this point of view, is intended primarily to be given to children as one would give them any other book about material in which they have a deep interest.

The first chapter deals with the original cells as seen under the microscope and then takes up point by point where the cells are made, the physiological development necessary for producing them, and the details of the reproductive structure. All this material is presented in a scientific, matter-of-fact fashion.

The material on the growth of the embryo should be particularly interesting both to children and to their parents, as should the comparison of growing embryos in animals and in man. The pictures throughout the book are unusually interesting, especially those of the human embryo from the fifth week through the sixteenth.

It is obvious that the author has had long and understanding association with children of all ages. Not only are the questions presented in the way in which children themselves would ask them, but the answers are simple, clear, and easily remembered.

There is nothing in this book to stir up unpleasant emotional associations or to cause strain in the average child. Since the problem of each child is an individual one, however, it would probably not be wise to recommend a wholesale distribution of this work to all children at all levels of development.

The only criticism of the book which might be made is that little is done to check on the child's use of the information given. The reviewer doubts that it would be wise to give this book to children without consulting the physician. It should certainly not be given without some sort of follow-up in the way of discussion by parents or by others concerned with the child's education in the field of sex.

Being Born is such an important contribution to the literature on this subject that it should be read by parents, teachers, ministers, social workers, and all others interested in the education and training of children from seven to twelve years of age.

ADA HART ARLITT

UNIVERSITY OF CINCINNATI

Guiding the very young child's reading.—Many years ago Kate Douglas Wiggin championed the young child in *Children's Rights* (Boston: Houghton Mifflin Co., 1892), a convincing book on the need of providing desirable attitudes and motivations early in life. The book under review[1] discusses a young child's right to the heritage that an intelligent home can give in fostering the beginnings of literary appreciation. Fortunate indeed are those children who can be given

[1] Clarence Wesley Sumner, *The Birthright of Babyhood.* New York: Thomas Nelson & Sons, 1936. Pp. x+86. $1.00.

such an advantage! This book is a step in extending such privileges more widely.

The author, the originator of a widely known plan for extending public-library service to hospitals, undertook a study to bring library service to parents of young children, which culminated in the Mother's Room of the Youngstown (Ohio) Public Library. This slight volume embodies the principles used in carrying out that plan, exemplified in the actual education of the author's young son. It is intended for mothers everywhere and for some practical aid to teachers in the nursery school, kindergarten, and elementary school. It is an attempt to outline the best and the surest methods of instilling in the child a lasting love for books and reading.

A little more than half the book discusses the theory, under the chapter headings: "Every Mother's Opportunity," "Why the Love of Books and Reading," "The Method," "The Mother's Room," and "The Child and His Library." Appropriate quotations precede the discussions. The method outlined is that of providing the child at the right moment emotionally with the degree of satisfaction in rhythm, word, and sound which will lead to enjoyment in literature. The psychology is up to date and has a bearing on the reading-readiness problem.

This account of how, from babyhood through the age of five, continuous advantage is taken of opportunities for developing appreciation is followed by two chapters giving "Reading Menus: Part I, The First Two Years; Part II, From Two to Five Years" and "Sources of Recommended Material."

These excellent and up-to-date bibliographies list and give some choice illustrations of lullabies, finger plays and action rhymes, picture-books, Mother Goose and nursery rhymes, poems, fables and fairy tales, and stories. The further material recommended is classified and gives the name of the publisher and the price. If the date of publication had been given, the list would have been even more useful. It also has brief annotations, which are especially valuable because they are based on the author's successful experience with the material, supplemented by the experience of many mothers and librarians.

Although the title is slightly misleading, because only one birthright is discussed, the book is a contribution to the literature of parent education and of the preschool period of the child. It is compact and attractive in format. There is only one illustration. A short introduction by Garry C. Myers, giving the genesis of the book, and a brief foreword by the author are included.

SOPHIA C. CAMENISCH

CHICAGO NORMAL COLLEGE

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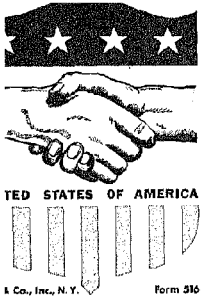

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THE ELEMENTARY SCHOOL JOURNAL

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Educational News and Editorial Comment

A CHALLENGE TO NEW-TYPE OBJECTIVE TESTS

The widespread and insistent demand for objective measurement in education in recent years has led to the development of a great number of so-called "new-type objective tests." The older type of measurement of achievement was regarded as highly subjective, and the feeling was that, if education was to become a quantitative science, it must develop objective measuring instruments. There has been a too common and naïve acceptance of the view that objectivity in scoring a test insures objectivity in measuring achievement. The relatively uncritical acceptance of the new-type test as a measuring instrument is pointedly challenged by Dr. Earl V. Pullias, of Duke University, in a recently published monograph entitled *Variability in Results from New-Type Achievement Tests*. Dr. Pullias' conclusions are of such importance that we feel justified in quoting them at some length.

SUMMARY

1. This investigation dealt with new-type or objective achievement tests which were constructed to measure the same abilities and which were administered under comparable conditions. The purpose of the study was to determine

the extent of disparity between the results from these tests. Both teacher-made and standardized objective tests were studied.

2. Sixty-three informal or teacher-made objective tests were constructed by thirty-five teachers. The subjects covered were fifth-, sixth-, and seventh-grade geography; fifth-, sixth-, and seventh-grade and high-school history; and sixth-grade health. The tests were matched in such a manner that two tests which were constructed to measure pupil acquaintance with the same body of subject matter were considered as a "pair." Paired tests were administered to sixty-eight groups of children. Forty-three groups took tests which covered relatively short units of identical text matter, and the remaining twenty-five groups took semester examinations based upon practically identical text material. Disparity was measured in three ways.

a) When the pupil scores on paired informal tests were correlated, the coefficients ranged from .845 to −.212. The median of the sixty-eight coefficients was .54. The extent of relationship was slightly less for semester tests than for tests covering a shorter unit of work.

b) A study was made of disparity in terms of the difference between percentile-rank positions on the two tests. The mean percentile-rank disparity found was 23 percentile points. The differences ranged from 0 to 99. About one-tenth of the pupils achieved ranks on one test which were 50 or more percentile points from their ranks on a second test; approximately one-fifth of the pupils varied in rank 40 or more percentile points; and finally, one-third of the pupils showed a minimum percentile-rank difference of 25 percentile points.

c) In terms of teacher marks the disparity between paired informal objective tests was found to be approximately one mark interval. The greatest amount of difference possible was three mark intervals. Approximately 8 per cent of the pupils varied three mark intervals (a mark of A on one test and a mark of F on a second); 23 per cent varied two mark intervals; and 36 per cent varied one mark interval. Two thirds of the pupils received marks on paired tests one or more mark intervals apart.

3. Three standardized objective tests in each of seven subjects and two such tests in each of three subjects were administered to 460 pupils in the sixth grade. The disparity between the results from comparable tests was found (*a*) in terms of correlation and (*b*) in terms of difference in grade-equivalent scores.

a) The correlation between results from standardized tests constructed to measure the same abilities ranged from .906 to .496. The median of the twenty-four coefficients was .68. As a group the spelling tests showed distinctly higher relationship than did other subject tests.

b) In terms of grade-equivalent scores the mean amount of disparity between two standardized tests constructed by experts to measure the same abilities, administered in comparable fashion and scored objectively was found to be about one school grade (ten months). The range of disparity was from zero to somewhat more than six school grades (sixty-two months). From about 1 to 44

per cent (depending upon the subject) of the pupils varied two or more school grades.

CONCLUSION

The findings of this investigation permit certain tentative generalizations which bear upon the characteristics of objective or new-type tests as these tests are customarily used. The validity of these generalizations is dependent upon the degree to which the findings revealed by this study are representative. The procedures used in the present investigation and the consistency of the findings are submitted as evidence that the results of this study are reasonably reliable. The generalizations follow.

1. A test may be objective in the sense that all personal opinion is eliminated in scoring and still fail to remove important personal elements from the evaluation of pupil achievement. There are many factors (other than scoring) in the total measurement situation which cause marked disparity between the results from two or more new-type or objective tests constructed to measure the same functions.

2. Measures of pupil achievement obtained from different informal objective tests may be expected to vary to a considerable extent. Thus if a pupil takes Teacher A's test his score, rank, and mark may be very different from what his score, rank, and mark would have been had he taken Teacher B's test. This condition is to be expected even when the tests cover identical bodies of subject matter and are designed to measure the same achievement. The extent of disparity which, in general, may be expected has been expressed in the preceding summary as points *a*, *b*, and *c* under 2.

3. Pupil ratings based upon standardized test scores show marked disparity. Thus a grade-equivalent rating for a given child in a particular subject as determined by one standardized test may differ significantly from his grade-equivalent rating as determined by a second standardized test. Although the differences will vary from subject to subject, in general, the disparity or difference may be expected to be approximately the amount reported in the preceding summary (points *a* and *b* under 3).

EDUCATIONAL IMPLICATIONS

Objective tests (teacher-made and standardized) are widely used in the public schools. There has not been much evidence adduced to establish the extent to which such tests are reliable measuring instruments when the processes involved in the whole measurement situation are considered. In the absence of such evidence the tests have been uncritically accepted, and this practice has tended to foster error in the interpretation of test results. An acquaintance with the limitations of objective tests should enable the tester to make allowances and to increase the comprehensiveness of his measurements.

An example of the questionable manner in which standardized objective tests are frequently used will indicate the value of recognizing the limitations of such tests. The seventh-grade pupils in the public schools of North Carolina for

several years were given the New Stanford Achievement Test. The suggestion was made that the grade equivalent 7.0 be taken as the minimum for promotion to the next grade. Now suppose that the State Department of Education had chosen the Public School Achievement Test instead of the test actually adopted. The facts revealed by this study indicate that in this case there would have been an average individual change in grade equivalence, for any given subject, of one school grade (ten months). For example, on the average, pupils who made a grade-equivalent score of 7.4 on a subtest of the Stanford Achievement Test would have achieved a grade equivalent of 6.4 or 8.4 on the corresponding Public School Achievement Test. (It should be remembered in this connection that both of these tests are widely used, that both were devised and standardized by experts, that both were constructed to measure the same abilities, and that grade-equivalent standards were established in the same manner.) In problems of promotion and of grade placement, the extent and consequences of the disparity here described are obvious. It is important then that testers have the knowledge that an individual grade-equivalent score is affected in considerable degree by subjective factors entering into the construction and use of the particular test on which the score is based.

The implications from the study of teacher-made tests are similar in nature. The findings indicate that a pupil's performance on new-type tests, in spite of the fact that the tests are objective in respect to scoring, is relatively variable. It is of significant practical value for persons using the new-type test to know this fact. If scores from tests are thought to be free from the effect of personal judgment, decisions based on them may not be checked by other evidence (as would tend to be the case when the decisions rest frankly upon personal opinion).

The facts here revealed, also, have certain implications for the theory or science of education. Since the appearance of Thorndike's *An Introduction to the Theory of Mental and Social Measurements* in 1904, educationists have tended to maintain that exact or absolute measurements are a fundamental requisite to a science of education. It is of value to know the relative extent to which so-called objective tests satisfy this requisite. The assumption that a science is possible only when uniform, relatively unvarying measures are available may or may not be sound. If it is sound, then the facts here reported indicate that education can hardly base its claim to be a science upon the reliability of the commonly used objective test.

Are new-type or objective tests more or less objective measuring instruments than are essay tests? The consensus of opinion on this point has been (if one may judge from the literature) that the new-type test is much more nearly free from the effects of personal factors. This opinion seems to have resulted from the fact that many writers have neglected to consider the complicated nature of the testing situation as a whole. Such evidence as is available indicates that there is probably little difference between the two types of test in respect to the presence of elements which cause disparity in the test results. However, this point was incidental to the present study; an adequate solution of this problem must await the accumulation of further evidence.

Finally, the educator may ask: In the light of the present evidence, should new-type tests be used in the measurement of educational progress? An answer to this query can be made only when the purpose of the tester is known. Problems such as (*a*) the type of function measured by the new-type test, (*b*) the extent to which the use of such tests promotes reflective thought or rote learning, (*c*) the degree to which new-type tests are an index to various types of mental content, and other similar problems demand for their solution data in addition to those presented in this investigation.

Some Statistics on Education in the United States

The following statement is quoted from the *New York Sun*.

Some 1,020,000 teachers will staff public schools, private schools, and colleges to instruct the 33,000,000 students now beginning their autumn school term, according to figures released . . . . by the United States Office of Education.

Five-sixths of the teachers are women and only one-sixth men, but a slow increase in the proportion of men who enter teaching has become evident in all excepting two or three states, the figures show.

A tightening-up of the requirements which candidates must hurdle before entering the teaching field is evident in the fact that within the last two years nine states have added an additional year of teacher preparation for elementary-school teachers.

Teachers' salaries have hit predepression highs, with the average earnings of city school teachers set at $1,735 and of rural school teachers $787 per year.

Of the students starting their school year 22,500,000 will con their books in elementary schools, 6,500,000 in high schools, and 1,250,000 in higher education. Outside these three categories, schools will enrol 2,750,000 persons.

The number of elementary pupils has dropped by 1,000,000 since the year 1929–30, but this decrease is more than balanced by an upsurge in high-school registration adding 1,735,000 since that year.

The enrolment in vocational-education classes in public high schools is expected to top last year's total of 1,382,000. The cost of education as a whole to each adult in the United States is seven cents a day, the United States Office estimates.

Thirty-three per cent of the country's adult population have at least entered high school, but only 3 per cent have graduated from college, the department's figures reveal.

State Control of Education in the Democracies of Europe

It is common knowledge that in the totalitarian states of Europe the educational systems are employed to develop in youth an emotional attachment to the existing pattern of political and economic

arrangements. The example of these countries raises in the minds of many Americans the specter of federal domination of education whenever any program of federal aid to education is proposed. The example of the democracies of Western Europe is often overlooked.

The following statement concerning state control of education in England, France, Holland, and Switzerland is quoted from a recent issue of the London *Times Educational Supplement.*

Under the auspices of the International Student Service, a number of students and teachers (about fifty-two in all) from France, Great Britain, Holland, and Switzerland met in conference at Oxford last year to discuss "State Control of Education." A report of the conference has now been issued, and can be had from 49 Gordon Square.

Members of the conference had before them a questionnaire, the main question being: In cases where the state is the authority providing educational services, what indications are there that it uses its formative and direct influence on these educational services to promote a general state ideal (religious or political or both) or to promote the interests of a particular section of opinion? A subsidiary question was: Are boys and girls leaving the schools alive to the nature and importance of current political issues, and provided with the mental equipment and practice needed to judge between claims on their political allegiance? On the basis of the questionnaire each country represented submitted a report on the existing position in that country, and these reports were circulated to the delegates before the conference started.

In regard to education in England those who answered the questionnaire were unanimous in replying "None" to the question, "What indications are there that the state uses its influence [in education] to promote the interests of a particular section of opinion, religious or political?" Answers were not so clear as to whether state influence was used "to promote a general state ideal, religious or political," but, says the report, "it is commonly held that the state exerts an influence in favor of political conservatism in the widest sense of the word, and in favor of the established church, or, more generally, in favor of Christianity." There is, in effect, "no serious complaint of any suppression of liberty of opinion or expression in our English state educational system. The danger is entirely in the other direction." One correspondent remarks, for instance: "Empire Day was not observed at either school at which I taught. When I have been present at a school function on Empire Day, it has seemed very properly and unimperialistically arranged. In the same way, the League of Nations Union meetings at schools I have attended could not have given offense to Mr. Winston Churchill himself. The two sets of observances might almost have been interchangeable." Almost without exception, too, correspondents considered that boys and girls "were leaving the state schools very largely apathetic and uninformed about the great political and religious issues of the day."

In the report on the position in France it is pointed out that, while the timetables and syllabuses are drawn up by the state, the state imposes "no particular pressure, whether political or religious, on teachers and pupils." The actual basis of state education in France is neutrality. "As a consequence, are boys and girls, on leaving school, conscious of politics? As a matter of fact at no time in the course of their education have they been explained the respective positions of political parties, nor the latters' arguments. According to the prevailing conception of education, it is up to the child's parents to enlighten him on this subject, in the way that they choose." Nevertheless "the ideal of freedom, which is considered indispensable, is insisted upon. Neither partial nor indifferent, the children, when they leave school, will not, strictly speaking, be prepared for political life—they will at most have acquired a few general principles. The influence of state education does not go any further." No religious teaching of any kind is given by state teachers (with the exception of the Alsace-Lorraine district, where special dispositions are in force), but neither is there any anti-religious propaganda.

In Holland it is found that "the conviction has become common property . . . . that the state should not impose certain religious or social ideals on its subjects through the schools." Resulting from this "we think we can say that the pupils who leave the schools have had no influence from the teacher in politics, but have had no education either such as to make them realize their political responsibility." In Switzerland "the state does not wish to bring into education any influence of a religious character other than that of the general moral idea of Christian humanity. Thus the teaching of religion is nowadays often described as 'Bible history.' The political judgment of pupils leaving elementary schools is in general extremely unformed."

Here and There among the Schools

Principles underlying large-unit planning.—From Charles J. Dalthorp, superintendent of schools of Aberdeen, South Dakota, we have received a mimeographed bulletin of some eighty pages bearing the title "Suggestions for Unit Planning." The bulletin does not purport to be a complete discussion of unit planning and teaching, but it does attempt to present simply and clearly the basic principles and procedures in unit-teaching. Chapters are devoted to the following topics: "Planning the Unit," "Planning the Aims and Objectives," "Planning the Approaches," "Planning the Pupil Activities," "Planning the Daily Lesson," "Planning the Assignment," "Planning the Summary," "Planning To Teach the Everyday Value of the Subject," "Planning Bulletin Board Activities," "Planning

the Use of the Library," and "Sample Unit Teaching Plan." The price of the bulletin is one dollar.

Organized instruction in effective habits and methods of study.—At the beginning of the school year 1936–37, the faculty of each school in Aberdeen, South Dakota, was requested by the administration to plan for the year a research or study project. These projects were to be planned by the teaching staff and directed by the school principal. The administration had two objectives in mind: (1) to give teachers an opportunity for professional growth along lines of their own choosing; and (2) to give teachers the opportunity to study the problems most vital to them in their immediate work. The faculty of Simmons Junior High School, under the direction of Principal William T. Gruhn, attacked the problem of improving the study habits of pupils. They have published the results of their investigation in the form of an extended monograph, entitled "A Program for Teaching Pupils How To Study." Apparently the teachers in this school have been particularly successful in combining available literature on the subject with their own experiences. The result is a guidebook adaptable to any group level, which contains a wealth of practical suggestions and procedures for both teachers and pupils. The monograph sells for $1.25.

Continuous-progress promotion plan in New Bedford, Massachusetts.—In 1935 Superintendent Allen P. Keith introduced a continuous-progress promotion plan into a few of the schools of New Bedford with the idea of extending the plan to other schools in case it proved satisfactory. After two years' trial the principals of the four schools in which the plan has been carried out made the following report.

This promotional procedure recognizes that learning is a continuous process. It provides opportunities for advancement in learning to be as continuous as mass instruction makes possible.

As we review the year's work, we recognize that the plan offers many educational advantages. The following we consider the most important and outstanding:

1. Teachers and principals study their pupils more than ever before. Therefore, it renders greater service to the children because of a better knowledge of their individual needs.

2. The flexibility of the system allows each child to be placed in a group where he is able to make steady forward progress.

3. It inspires discouraged children to greater effort, for they can see progress.

4. As the name implies, it seeks to prevent failure and grade repetition. It stresses child growth in terms of interests, attitudes, and habits of work as well as in terms of subject matter.

5. It offers teachers an opportunity for a wider range of teaching experience. It is an aid to teacher growth, for, as the teacher gains a greater understanding of the individual pupil, she has a more sympathetic attitude toward his needs.

6. The promotional procedure is in line with modern educational trends.

It was recommended that four other schools be added to the group trying out the plan.

A county superintendent's supervisory bulletins.—A unique type of supervisory service has been adopted by J. P. Karpen, superintendent of schools of Dakota County, Minnesota. From time to time he supplies the teachers of his county with mimeographed bulletins, "From the County Superintendent's Notebook." In these communications to his teachers he takes the opportunity to call to their attention the practices and procedures in the various schools of the county which he deems of special interest and value. In this way teachers are kept informed of the innovating practices of their colleagues.

In-service training of teachers in the Baltimore schools.—The September–October issue of the *Baltimore Bulletin of Education* contains a detailed account of the program of in-service training in the Baltimore city schools as it has been carried out for the past ten years. Through the administrative council, the divisional conference, the work of special committees, lecture courses, demonstration teaching, supervised classroom observation, conferences, orientation activities, and experimental work, every member of the teaching staff is afforded opportunity for in-service training.

The in-service training program offers a vital challenge to the professional ambition and spirit of every person in the system. Its activities encourage each individual to develop competence in self-analysis, self-criticism, and self-improvement; its aim and its setup challenge him to contribute his share in promoting unity in the school system by carrying out the policies and the objectives of the system as a whole. The entire program reaches out to provide training for every branch of the system so that improvement in classroom instruction, as well as improvement in the entire school system, may be a continuous process of development.

Administrative practices in Nebraska schools.—For a number of years prior to 1930 the Nebraska State Teachers' Association pub-

lished an annual survey of administrative practices in the schools of the state. During the depression these publications were discontinued, but they have now been revived with the publication of a bulletin entitled "Current Practices of Nebraska Schools, 1936–37," which was prepared by Galen Saylor. The following quotation indicates the general purpose of the bulletin.

> A survey of current practices serves several very useful purposes: it enables school administrators to determine the general trend of practice throughout the state and to learn what techniques and procedures are being used among the schools; it affords administrators a basis for comparing the practices used in their respective schools with the practices of other schools of similar size and classification, as well as with all schools in the state; and it gives the student of educational administration an insight into actual school conditions throughout the state. The primary aim of the N.S.T.A. in issuing the bulletin is to aid school administrators in solving their daily problems. . . . .
>
> To facilitate a comparison of practices, schools were classified into six groups according to the total number of teachers on the staff, including superintendents, principals, and supervisors. Thus each school may compare its practices with those of schools of comparable size, as well as with all schools replying.

Data are presented which show current practices in such matters as teacher personnel, elementary-school administration, high-school administration, administration of extra-curriculum activities, and general administration.

The bulletin may be secured for twenty-five cents from the Nebraska State Teachers' Association, Lincoln, Nebraska.

Making the Results of Research Available for Teachers in Elementary Schools

One of the major problems of American education is to find ways and means of diffusing the results of research into the classrooms of the nation. Teaching practice often proceeds quite unaffected by the findings of research workers. In order to lessen the lag between research findings and teaching practice in elementary schools, the Department of Public Instruction in Michigan, through its Curriculum Steering Committee, has published a significant monograph, entitled *What Does Research Say? A Statement of the Implications of Educational Research for Teaching in the Elementary School.* The purpose of the volume is described in the Introduction as follows:

> It undertakes to publish some of the findings of research in a form that will be particularly meaningful to the elementary-school teacher, answering some of

the problems that perplex her, helping her to a better understanding of the child, and increasing her skill in the methods and practices of her art.

What Does Research Say? undertakes to throw light on many educational questions to which research and experimental practice have found the answers or partial answers. It is a venture in applied research. It attempts to give practical answers to practical questions. The best way to do this, in the present status of educational research, appears to consist of asking some competent person to give the best answer research is able to give, even though, in the present state of knowledge, the answer may not be conclusive. The critical problems of the teacher and the definite knowledge of the research worker do not always overlap. The careful reader of this volume will occasionally find the personal equation present, though unsubstantiated opinion, when it appears at all, usually carries a frank note of warning.

In many ways *What Does Research Say?* is a pioneering venture. It is designed to improve teaching by the method of placing in the hands of teachers many of the scientific instruments that have been forged on the anvil of research. In attempting to find a common denominator for research and teaching, it undertakes to do something which many thoughtful students of education regard as extraordinarily difficult; but if the book has shortcomings—and as a pioneer enterprise it probably has a great many—they should not rob it of its basic value.

The questions raised and answered in this volume are of great practical import to teachers everywhere. The following chapter headings will indicate the general types of problems around which the questions are oriented: "Child Development," "Individual Differences," "Personal and Social Relationships," "Materials of Instruction," "Methods of Instruction," "Records and Reports," "Classification and Promotion of Pupils," "Arithmetic," "Expression," "The Arts," "Health, Physical, and Safety Education," "Reading and Literature," "Science," "Social Studies," "Education for Character," and "Activity Programs."

A National Program of Physical Education

For the past nine years the Committee on Curriculum Research of the College Physical Education Association has been working on the development of a curriculum of physical education which would constitute a basic uniform program for the schools and colleges of the nation. The results of the study have now been published in a booklet entitled *The Physical Education Curriculum*. The general purpose and content of the booklet are clearly expressed in the following excerpt from the Foreword.

This volume is an unusual combination of materials in highly condensed form presenting a *national program of physical education* suitable for uniform adoption and use in schools and colleges throughout the United States. It is the result of nine years of intensive study by the Committee on Curriculum Research of the College Physical Education Association, assisted by hundreds of leading physical-education supervisors.

The material is in the form of a carefully graded curriculum sufficiently flexible to be adaptable to any ordinary type of school situation regardless of climatic or geographic condition or equipment limitation.

It is hoped that the curriculum will serve two major purposes: first, to set the standards for a sound educational program of physical activity that can be made available to every child in the United States; and second, to make it possible for children to transfer from one school, city, or state, to another, without excessive loss or embarrassment due to lack of uniformity of programs. A uniform adoption of this curriculum in schools throughout the country will assure the attainment of both purposes.

The material is presented not as an ideal program but as a practical, workable one that should serve as a small but growing snowball that will accumulate volume, strength, and solidity from year to year as it is tried and tested in varying situations by progressive physical-education supervisors and teachers.

Big things grow from small beginnings. Every structure must have its skeleton upon which to build. This booklet presents a skeleton curriculum. The body of the structure should develop slowly, keeping pace with the constantly changing form of the larger education curriculum of which it is a part.

This booklet has been formulated on the recommendation of a group of representative city and state supervisors who participated in the committee study during the past year. It is their feeling that the time is ripe to undertake the promotion of a uniform national program in order to eliminate some of the glaring weaknesses so commonly observed at the present time.

It is accordingly urged that physical-education teachers, supervisors, school principals, superintendents, and boards of education everywhere give careful consideration to the question of officially adopting this curriculum as a basic or core program for their school systems, making necessary provisions for adaptations to local conditions.

The committee chairman will appreciate it if school officials will notify him as soon as they have agreed upon the adoption of the program. This will aid the committee materially in its future work by indicating the extent to which the movement has developed. Future reports on the success of the program also will be very helpful.

The booklet is organized in three parts. Part One presents a brief description of how the curriculum has been developed; Part Two, the detailed program in graded form with suggestions on its use; and Part Three, suggestions on suitable standards for the administration of the program.

The booklet may be secured for sixty cents from the chairman of the committee, William Ralph LaPorte, of the University of Southern California.

The Influence of Income on Social Attitudes

At a recent meeting of the American Psychological Association, Professor Arthur W. Kornhauser, of the University of Chicago, presented the results of an investigation to discover the attitudes of various income classes toward fundamental social issues. The following summary of Professor Kornhauser's findings is quoted from the *New York Sun.*

People with low incomes and the middle-income class he found are likely to share similar points of view on social issues, but he also reported numerous backfires, cases where opinion was not controlled by class.

The study was made by individual interviews with six hundred adults. They were chosen as samples of four groups—low income, middle income, upper income, and especially well to do.

On government ownership there was a tendency to think in class terms. It was favored by 30 per cent of the poorest, 15 per cent of the middle class, 8 per cent of the upper class, and 1 per cent in the wealthiest group.

Contrasted to this, even the latter said "yes" to the idea that "wealthy people have too much influence in running the country." The affirmatives on this question, of the four groups, starting at the bottom, were 75 per cent, 61, 34, and 7.

There was very general agreement of all classes that working people do not get fair treatment and fair play. There was, said Dr. Kornhauser, a tendency for the low- and the middle-income classes to stand together on questions about present distribution of wealth and influence.

"It is worth noting," he reported, "how frequently the percentages for both engineers and lawyers parallel those for business executives, contrary to the hopes of certain intellectuals who like to view the professional men as socially minded and independent of business bias.

"Unlike engineers and lawyers, college professors, chosen from several Chicago institutions, give responses more similar to those of the manual-worker groups."

It was surprising to find, he said, that those stressing desire for greater personal freedom are more than twice as frequently for government ownership as are the others.

Who's Who in This Issue

Leonard B. Wheat, superintendent of schools at Western Springs, Illinois. Jennie Lloyd Thomson, director of child guidance of the public schools in Glen Ridge, New Jersey. C. C. Crawford,

professor of education at the University of Southern California. JACOB A. CARMICHAEL, principal of El Segundo Grammar School, El Segundo, California. E. W. DOLCH, assistant professor of education at the University of Illinois. MAURINE BLOOMSTER, first-grade teacher in the Lincoln School at Champaign, Illinois, co-operating with the College of Education of the University of Illinois in supervision of practice teachers. EMMA REINHARDT, head of the Department of Education at the Eastern Illinois State Teachers College, Charleston, Illinois. G. T. BUSWELL, professor of educational psychology at the University of Chicago. WARREN W. MCSPADDEN, instructor in natural science at Teachers College, Columbia University. ANNE E. PIERCE, head of the Department of Music in the Experimental Schools and assistant professor of music at the University of Iowa. W. G. WHITFORD, associate professor of art education at the University of Chicago. HOMER J. SMITH, professor of industrial education at the University of Minnesota. BEULAH I. COON, agent for studies and research in home-economics education in the United States Office of Education. EVANGELINE COLBURN, teacher-librarian in the University Elementary School at the University of Chicago. D. K. BRACE, professor of physical education at the University of Texas.

THE FLEXIBLE PROGRESS GROUP SYSTEM

LEONARD B. WHEAT
Public Schools, Western Springs, Illinois

More and more educators are rebelling against the type of schooling which tries to fit the child to the school pattern rather than fit the school to the child. They wish to get away from the traditional system in which all pupils are treated alike and pupils are promoted or failed every year. There has been much verbal condemnation of what is now generally done. In a few places pioneering spirits have gone beyond the talking stage and have attempted to work out better ways of training school pupils which would give real recognition to the facts about individual differences. For the most part, however, high costs or other limitations have prevented the newer plans from being widely adopted.

Working toward the goal of a practical system of school organization and administration which would better adjust the average school to the individual child, the public schools of Western Springs, Illinois, have developed *the flexible progress group system.* The plan, which is relatively simple and may be slightly less costly than the old way of handling school children, was instituted in the autumn of 1934. Since then it has been undergoing trial and refinement of detail. It functions successfully in Western Springs, a residential suburb of Chicago, and gives indications that it may be an advancement applicable to schools generally.

The flexible progress group system involves somewhat new methods of pupil classification, promotion, and reports of progress. It calls for minor adjustments in teaching methods and varies the curriculum somewhat for different children. The outstanding feature of the system is that it abolishes for all children the repeating and the skipping of grades and yet allows each child to work at all times at the grade level which fits his educational foundation and mental maturity.

The flexible progress group system was first applied to the primary

grades because there reading dominates the curriculum and makes it possible to base the strictly educational adjustment of pupils on that one subject. Even pupils well along in third-grade work have not yet progressed far enough with their schooling to show variations in relative standing from subject to subject of a degree which would warrant making different pupil classifications in each subject field for purposes of teaching. Language and spelling are so closely related to reading at the primary levels as to be practically a part of the latter. Any study of primary geography or history really is nothing more or less than reading books with social-studies content. At these lower levels, only arithmetic can be said to be a subject sufficiently distinct from reading to offer much chance for pupils to show achievement scores different from their scores on reading. When the arithmetic curriculum follows the postponed schedule which was recommended by the studies of the Committee of Seven[1] and which is found in most of the newer textbooks, formal arithmetic is begun in Grade III. It will be almost Grade IV, then, before the pupils will show any appreciable spread in arithmetic learnings. Classification and promotion based largely on reading achievement, therefore, are quite practical through the first three grades.

With these considerations in mind, the administration of the Western Springs public schools formally did away with the first three grades in September, 1935, after foundation-laying in Grade I during the previous year, and set up instead a primary school without annual promotions.

In the primary school pupils are classified and grouped largely on the basis of reading accomplishment and skill. First-year children entering in the autumn are given preliminary classification on the basis of mental age and previous kindergarten record. When all the children of the primary school are ranked according to reading age and mental maturity, it is a simple matter to divide them so that each teacher has about thirty-five pupils, each class being at a different level of learning or maturity. (In the Western Springs primary

[1] Carleton Washburne, "The Grade Placement of Arithmetic Topics," *Report of the Society's Committee on Arithmetic*, pp. 641–70. Twenty-ninth Yearbook of the National Society for the Study of Education. Bloomington, Illinois: Public School Publishing Co., 1930.

school the classes average thirty-six pupils and vary from thirty-three in first-year classes to thirty-eight in the upper primary classes. There are eight classes in the three-grade spread of the primary school.) After the pupils are assigned to classrooms, each teacher divides the pupils into three or more groups for teaching purposes. Each group within a class is at a different level of progress. The same distance separates the lowest group in one classroom from the top group in the next lower classroom as separates any two groups within a class. In effect, then, there are eight times three groups, or twenty-four different grade levels in the Western Springs primary school instead of three grade levels with two or three classes at each grade level as under the traditional set-up.

From group to group and class to class there is a readily noticeable difference in the general maturity of the children. This ladder of development leads from the group most immature and least advanced in learning among the first-year children to the most advanced group among the third-year pupils. Measurement shows that the averages between groups run upward in about the same order whether the differences are checked on a scale of learning, mental age, height, weight, chronological age, or estimate of social development. A study of chronological-age records, for example, shows that there is an average age difference of approximately six to ten weeks between sequential groups. The order of these average differences between groups parallels, as might be expected, the order of the average educational grade differences between groups. The general organization of the primary school is such that children at all stages of maturity deal with school experiences graded to their level of development.

Such an organization results in much greater homogeneity for each class and for each teaching group. This improved homogeneity tends to make for more teachable groups, an improved learning situation for each child, and less widespread preparations by the teacher to meet the varying needs of the children in her class.

The flexible progress group system is not a static system, however, nor one by which pupils are regrouped once or twice a year. It encourages changes in the personnel of groups whenever the need arises. It allows for the fact that individuals within a group differ

from one another in rate of mental growth, speed of learning, amount of absence from school, rate of physical and social development, and other variables. Several devices are used to meet these individual needs and capacities.

Children who are absent for short periods of time, who are less apt learners and fall somewhat behind their group, or who otherwise need special attention are first given help in a period reserved for them each day. All pupils except those needing extra attention are dismissed each afternoon thirty minutes earlier than is customary in most schools. There is a similar early dismissal for first-year children in the forenoon. This arrangement permits the children who do not need the longer school day to be free and leaves time daily when the teacher can devote her undivided energies to work with pupils needing it. This device, of course, is employed in many schools about the nation.

If a child, even with extra help, lags increasingly behind his group until he is so far in arrears that the next oncoming group is at his level of learning, he is transferred (not demoted) into this next lower group. In like manner a child who has been absent for a month or more with illness may be transferred on his return to school into the oncoming group which is then at his stage of learning. He thus takes up where he left off and does not have to tax himself with makeup work when physically run down.

The adjustment of the rapid-learning child is almost as easily made. It merely means that a few pupils (seldom more than two or three) in each classroom are on individual programs for a limited time. A pupil who acquires greater reading proficiency than the others in his group, who finds opportunity to read more extensively, and who in other ways shows advanced development may in time grow quite out of adjustment educationally and perhaps otherwise with his group.

With such children effort is first made to broaden and enrich the curriculum as much as possible before they are permitted to go ahead to higher levels, especially if they are not over age chronologically. Wide reading in practically all the available books at each level and extra project work are given to those who tend to forge ahead. This procedure probably does not retard much the acquisition of skills,

such as the reading skills, but it does help to keep pupils who mature fast mentally from covering the basic curriculum materials so rapidly as to gain a school classification with older children who are socially and physically much more mature. The broadening and enrichment activities also aid in avoiding the dangers which are likely to arise when able children pace one another, with more or less competitive strain.

A pupil who definitely evidences the need for transfer into a more advanced group is put on an individual program and allowed to work ahead of his group on the course of study. When he has caught up to the level of the next group, he is transferred into it, drops his individual program, and takes up his class work as a regular member of the more advanced group. The period during which any child is on an individual program may be only a few days or may occupy a few weeks.

Transfers of pupils from one group to another in either direction may be made any week end during the year. They are made not only from group to group within a class but from an extreme group in one classroom to the group at the next level in the classroom just above or below, as the case may be. Transfers between groups, which also involve room and teacher changes, call for an extra bit of caution lest an improved subject-learning adjustment be made at the cost of social maladjustment. The complete educational situation must be considered in each transfer.

No child or group is expected to cover any prescribed amount of the course of study in a year or any other given time. No attempt is made to force the children's development to fit the theoretically average schedule of a grade a year. One group of first-year pupils with advanced maturity might be ready for, and begin the work of Grade II, as tradition defines grades, in March or April of their first school year. An average group would start the work the following September. A third group, less matured and slower in learning, might not take up the second-grade course of study until late autumn or early winter of the second year of school. All advance at the speed which accords with their rate of learning and approximate rate of mental growth.

Each group progresses as far as possible with the course of study

during the year, but reasonable mastery of subject matter and skill is expected every step of the way. Each September all pupils take up their schooling where it was left off the preceding June. The rate of school progress varies for different children, but all are going ahead at all times. Some may require four years to go through the primary school. If so, they will advance more slowly and with no failing or repeating of a grade. Others may complete the curriculum in two years and will be able to do so without omitting or skipping any part of it. The majority of pupils, of course, will cover the ground in three years.

Until the school year 1936–37 groups which were to complete the primary-school course of study sometime during the last half of a school year were given a broadened and enriched program throughout the final year so that they would end their primary-school studies the last of May. This arrangement permitted the children to undertake fourth-grade work under the traditional grade-a-year system in the following autumn without the necessity of any awkward adjustments. This plan has worked out very well for the most part, because about half of the pupils in such groups are laggards who need the substantial foundations provided by such an opportunity.

The administration of the Western Springs schools has felt the desirability of extending the flexible progress group system through the intermediate grades, and much study has been given to the matter. Several modifications which might care for the multiple-subject difficulties met in Grades IV–VI have been considered. A couple of the plans have been given some trial. The plan which seems to give most promise of practical development merely adds to the system used at the primary levels the requirement that each pupil keep his progress in all subjects at about the same grade level. When a child falls far behind his group in one or more subjects and, with special help during the extra period at the end of the day, is unable to bring his work in those subjects up to the level of the other subjects, he may be required to use the time ordinarily assigned to the subjects in which his achievement is more advanced for study on his more difficult subjects. In thus bringing all subjects to about the same level, he may fall enough behind his group to make transfer

into the next oncoming group advisable. Children who progress ahead of their group are handled essentially as at the primary levels.

This modification of the system for the intermediate-grade levels was tried out for the first time during the school year 1936–37. It is quite unproved and is in no sense advocated for adoption elsewhere until it is further perfected and its general merits are tested by trial. Some needed adjustments have been found for the intermediate organization, and more may be necessary. Dividing each class into two groups, instead of three as at the primary levels, seems better for the middle grades. This plan seems to work reasonably well in the various subject fields except perhaps the social studies. The handling of over-age pupils, who already are retarded a year or more and who are gradually falling further behind, offers a problem in Grades IV–VI which the flexible progress group system as now employed meets little better than the traditional system. Further modifications of the system or supplemental handling of these slower pupils will have to be worked out at the intermediate-grade levels. It may be, indeed, that the new system will prove to be not adaptable above the primary school. If not, its virtues need not be lessened for those lower levels, where most pupil "failures" of a grade occur in the average school.

In the case of the primary school the flexible progress group system works in Western Springs and probably will work nicely in other residential suburbs. Its first success has been sufficient to persuade some neighboring communities to adopt the plan. It is desirable, though, that the system be thoroughly tested with a control-group experiment in a larger and more average school system before it is regarded as an established improvement for schools in general.

Achievement-test results can only give indirect evidence on the success of the system because of several local uncontrollable factors. The school system is too small for a control-group experiment. An annual turnover of about a third of the school staff because of low salaries does not permit year-to-year comparisons. A change in reading materials and alterations in teaching methods also make comparisons of present achievement with past records of little worth. High average intelligence quotients (about 110) make comparison with national norms on standardized achievement tests of slight

value. About all that can be studied are the achievement scores as compared with the mental-age averages. Here results indicate that achievement is about in accord with mental maturity. Achievement scores for given chronological ages at the primary levels in Western Springs run well above the national norms, as they should, and are better than the achievement scores for similar age groups in preceding years. At least, subject achievement has not suffered, and part of its improvement may be chargeable to the new primary school and the flexible progress group system.

A questionnaire inquiry in June, 1936, showed that 93 per cent of the parents preferred the new plan over the traditional organization. The majority also indicated that they thought the children were happier and more interested in school under the new system, a belief also expressed unanimously by the teachers.

The eleven teachers who have handled classes at the primary levels under the flexible program during the last two years have, without exception, indorsed it as a definite improvement over the old lock-step method. They believe that better accomplishment, happier pupils, and easier handling of class work accrue with the system.

As far as the school administration is concerned, the plan proves its superior merits when it eliminates failure and repetition of grades for slow learners and makes possible other pupil adjustments, such as acceleration without skipping a grade and ready accommodation for pupils who have had much absence from school. The feature of continuous progress for all pupils alone does much to recommend the plan. The fact that achievement may be advanced a little and that general retardation may be decreased somewhat is encouraging. The wholesome interest and pleasure that most pupils find in school under the system show that it probably is meeting their evolving wants. The emphatic approval by parents and teachers of the new primary-school organization lends weighty support to its desirability.

The new system does not result in high costs and should not increase expenditures wherever it may be instituted. Quite the opposite, the costs per pupil often may be reduced. The greater homogeneity of classes makes it possible for a teacher to handle classes as large as, or larger than, those employed with the traditional system.

Enrolment situations which in the past sometimes called for an extra teacher to handle an overflow part of a class or which necessitated having two or more full grade levels under one teacher are eliminated with the new arrangement. Pupils can be divided among the teachers so that all have about the same class enrolment and so that each class contains less than a spread of one grade in learning levels among the pupils. This advantage has already been enjoyed in Western Springs, where the average cost per pupil for current expense runs under $55, a figure comfortably under the Illinois average of about $65 per child. The cost consideration of the flexible progress group system is in its favor.

It seems probable that many schools in diverse communities may break with hidebound practice and may try out the school plan described in this article. The system should be tested further in places of various types. At the middle-grade levels it needs some constructive modifications toward improvement, as well as testing.

SOME ESSENTIAL FACTORS IN LEARNING TO READ

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There is such a mass of material on reading methods and the conditions governing the use of the methods that sometimes we cannot "see the wood for the trees." This article is the writer's effort to find a few essentials in a reading situation.

THE READING PROCESS

In a report of the British Association for Advancement of Science, Hume says: "Acquisition of the mechanics of reading depends upon the ability to perceive and synthesize the contributions received from the eye, the ear, and the muscles. Ability to comprehend what is read involves the apprehension of the right relations between the various elements of the sentence" (9). If this statement be accepted as a definition of what happens when reading occurs, the educator's responsibility is to know something of how and when perception, synthesis, and apprehending take place.

From the confusion of things surrounding a child in a "first" reading group, certain sights, sounds, and movements gradually emerge, take form, and become perceptual experiences. In order that those perceptions which are useful in reading may be induced, the child's attention must be arrested by such specific symbols as are said to stand for the words which he speaks and hears and to which he generally responds. These symbols are as unfamiliar and confusing to a child as are Greek quotations to the average adult. Like the adult, a child often looks at the printed word with an unseeing eye, while attending to things he can really understand. If his attention is to be attracted and held long enough to make these strange symbols familiar and meaningful, the symbols must be presented with some knowledge of how perception takes place.

VISUAL PERCEPTION

According to laboratory experiments, visual perception is controlled by such factors as the number of forms presented, their shapes and grouping, and the degree of meaning which they possess.

1. *The number of forms presented.*—A large number of forms is more difficult to perceive than a small number. The number of forms easily perceived ranges from three to five. These facts seem to support the theory of presenting a simple vocabulary at the early stage in the teaching of reading because words contain a smaller number of forms than phrases. Gates says, "Without ability to read single words, pupils can hardly attain skill in sentence reading" (7), and Dolch has written, "All beginners must *perceive* the printed page a word at a time" (5). As reading involves the ability "to recognize many words by their appearance" (6), words must be presented in keeping with the power of the eye to receive impressions. Although the ability to read phrases is desirable as a reading habit, knowing the words that the phrases contain is the essential; for we meet the same phrases only occasionally, but we continually meet the same words in different phrases.

2. *The shapes and grouping of forms.*—The eye tends to notice general characteristics, then becomes critical and conscious of details. This fact supports the theory of presenting words and phrases and then calling attention to the letters and words composing the phrases. Opportunity to perceive words and phrases must occur repeatedly in order that their details may be noted and a means supplied for judging why one is not another.

Grouping, even with adults, begins when six forms are presented; six are unconsciously divided into groups of three. This fact suggests that children could be expected to perceive, with ease, words of three letters or phrases of three words. Rickard (11) reports that six-letter words proved to be less difficult for young children to recognize than words with four or five letters, probably because the six-letter words can be divided into syllables. The writer has noted that children's eyes are arrested by words composed of very black letters closely spaced. Such print grips the eye while loosely spaced letters cause it to wander.

3. *Meaningful material.*—Meaningful and simple stimuli produce a correct perception and response more quickly than do meaningless and complicated stimuli. This fact seems to indorse methods which make use of the interests, experiences, and words that are familiar to children through speech. Interest will arouse the desire to use eye and ear perceptions, and a reading lesson which follows some common experience—a familiar story, a trip to the firehouse, or making a workbook—will provide meaning to words and phrases symbolized in print. In the words of Ayer, "What an individual sees in an object depends upon the knowledge he brings to it" (1). New words and phrases must be simple and uncomplicated if quick and correct perception and response are desired. The new words and phrases should be freed from a mass of printed matter while their characteristics are being noted.

Clearness of perception increases two and three times by several exposures. Repetition makes new things familiar and meaningful. We tend to note familiar names more readily than unfamiliar because we have seen the familiar so often that we have become conscious of their characteristics. Such consciousness has not been developed through any flash-card method but through careful scrutiny; for the eye cannot become conscious of characteristic details in one or more swift glances. This fact has been proved in the laboratory use of the tachistoscope, and any driver has proved it in his inability to read signpost directions while traveling at high speed. If, then, children are to gain a clear perception of words and phrases, they must have opportunities to see the words and phrases many times without haste and under varying conditions. Clearness of perception occurs more readily when there is opportunity to see a few words many times than when many words are encountered a few times.

If meaningless or complicated stimuli can be perceived as individual or group parts of the *whole* stimulus, correct perception will be quickened. The ability to make this synthesis depends largely on familiarity with the material. It has been proved to be easier to group letters or phrases in one's native language than in a foreign tongue because the native-language words have been seen more frequently. As a person becomes familiar with the parts and the structure of words, phrases, sentences, and paragraphs, he does not

actually perceive each word but, at a glance, selects and combines the distinctive characteristics. This perceptual power is not possible in the beginning stages of reading, for it depends on such familiarity with each part that quick recognition can take place.

It would seem that becoming familiar with the details of printed words and phrases is essential if correct perception and synthesis are to occur. In visual perception, a person becomes familiar with the things or forms which he is most frequently induced to see.

AUDITORY PERCEPTION

Impressions received from the ear, or auditory perceptions, are controlled by such factors as the relative positions of the ear and the sound, the intensity and the distance of sound waves, and association and practice.

1. *Positions of ear and sound.*—Sound is more easily perceived when located directly opposite the ear, and ease of hearing decreases as sound approaches the center of the body. Except in cases of speech or hearing difficulties, this factor is of slight importance in learning to read.

2. *Intensity of sound.*—Loud sounds and distant sounds are likely to lack clearness; for the former cause reverberations and the latter are caught in currents of other sounds. If auditory perceptions are to be clear and accurate, there is need of a quiet room, where low voices can be used and where the ear will not be confused by conflicting noises. Children have to learn to listen to specific things and to shut out irrelevant things. Thus, the more limited the number of sounds, the more readily will the desired perception take place.

3. *Association and practice.*—Association and practice influence sound localization and discrimination generally. According to Seashore (13), visual and tactual images and sensations influence what a person hears. In other words, one tends to associate with sound what other senses have made familiar. This fact indorses the practice of allowing children to hear, see, say, and get the "feel," through touch and movement, of new words.

As in visual perception, recognition can occur only when a sound is familiar, and familiarity depends on repetition or practice. Thus, new words must be repeated until the ear becomes used to them.

They must be practiced until the tongue and the throat muscles become familiar with them. Such needs can be met through experiences in phonics and in oral reading. Until a child begins to read, he has known words as sounds which stand for objects and ideas; reading is based on certain sights which represent these sounds. In the beginning stages of reading it is natural to associate these strange sight symbols with the sounds for which they stand. Vocalization should be expected in this transition stage. St. Augustine, writing in the fifth century about the habits of St. Ambrose in his study at Milan, said, "When he was reading, he drew his eyes along over the leaves, and his heart reached into the sense, but his voice and tongue were silent" (12). Many adults of today vocalize when reading something new to their experience or difficult for them to comprehend. If silent reading was worthy of comment as late as the fifth century and if adults still vocalize on occasion, it is illogical to expect children to leap into the habit of reading silently.

Children may be expected to hear words, letter sounds, and phrases which are uttered clearly and often, provided there are not too many irrelevant and conflicting sounds.

KINESTHETIC PERCEPTION

Kinesthetic perception in reading involves a muscular response to printed or written words. Naturally the eye muscles are most frequently used, but in the learning stage the muscles of ear, tongue, hand, and arm are also brought into play. In fact, there is likely to be a great waste of muscle response; for, like a new golf-player, a young child does not know which responses are most effective. Consequently fatigue is a frequent by-product of the process of learning to read. Children often see a word backward; they confuse the end with the beginning. In uttering a printed word, they sometimes use the wrong set of muscles, perhaps the lips instead of the tongue, and produce *p*'s when aiming for *t*'s. Like the golfer, it is only through attentive practice that their muscles become trained to produce the actions desired. Kinesthetic perception, like visual and auditory perception, is controlled by such factors as simple stimuli, attention, practice, and freedom from fatigue.

PERCEPTION AND SYNTHESIS IN THE ATTAINMENT OF READING ABILITY

In short, laboratory and life situations prove that visual perception is facilitated when a few forms having arresting characteristics are presented so frequently that they become familiar and meaningful and can be recognized and grouped at a glance; that auditory perception is facilitated by limiting the number of sounds heard and by hearing them so often that they acquire meaning; and that kinesthetic perception becomes selective through many opportunities to discover and practice the desired response. Although perception has been discussed under the headings of visual, auditory, and kinesthetic, it must be remembered that perception takes place with no such distinct division. What one sees is influenced by auditory, muscle, and other sense experiences; what one hears and responds to in any muscular way is so tied up with other sensations that separation is impossible. It is safe to say that the richer the perceptual experiences, the greater will be the degree of learning.

Neither can perception be separated from the synthesis of impressions referred to by Hume (9). Everybody tends to relate one impression or its parts to another. In reading, the words perceived are put together in phrases, sentences, and paragraphs. This process is carried out more readily if we know the words by sound, meaning, and sight. Synthesis is bound to occur because it is included in any sensation; but, if the desire is to establish such *specific* kinds of "putting-together" as are demanded by accepted word, phrase, sentence, and paragraph structure, children must be familiar with each part. Familiarity develops by perceiving a small number of forms sufficiently often to make recognition assured. As a child becomes familiar with combinations of letters, words, and phrases, he will not actually perceive each word but will select the distinctive and significant forms. This selective ability adds to his reading facility by freeing him from dwelling on technique and by enabling him to understand the "right relations between the various elements of the sentence" (9). This stage makes possible the appreciation of content; the ability to comprehend the printed page has been attained.

READING READINESS

Correctly perceiving and understanding printed words and pages is not the only kind of learning which takes place when children begin to read. Most young children look forward to reading as a happy and desired experience, and many of them are not disappointed. As in all human activity, they soon become conscious of difficulties, of success or of possible failure, and they are stimulated or fearful, according to their individual abilities and temperaments. If coping with the difficulties is not beyond the children's abilities, success and satisfaction will follow. If, however, the children's perceptual powers have not reached the discrimination demanded in reading, the inevitable result will be anxiety, fear, and evasion of reading situations. The children will learn to fear the use of the very powers which reading requires.

We must know, then, not only what methods are effective but when the methods should be used if desirable learning is to take place. Burk (3) states that accuracy of perception is dependent on physiological maturity. Hurlock and Thomson (10) found that between the ages of four and a half and eight and a half, inclusive, the ability for accurate and detailed perception increases with age and, to a lesser degree, with intelligence and that the tendency to see associated objects and design increases with age but shows little relation to intelligence. Since reading calls for accurate and detailed perceptions and for the ability to see associated forms, it would seem that chronological age is an important factor in learning to read.

In 1934 Bigelow (2) reported an experiment showing the relation between chronological age and success in the first four elementary grades. She found that children entering Grade I when six years of age and over and with intelligence quotients of 110 or more were almost certain to succeed in the first four grades and that children who entered before they were six were more than likely to fail unless they had superior intelligence. In children entering before the age of six there was frequent evidence of serious emotional strain. Bigelow's study supports the findings of the writer (14) that, when the chronological age for beginning reading ranged from six to seven years instead of from five to six, the percentage of children who liked reading rose from 8 to 91 and the percentage who were anxious

about reading fell from 44 to 3. Apparently children cannot be expected to respond constructively to the most perfect methods of reading until they have reached the physical age when the quality of perception required has developed.

Unfortunately there is little proof of the age best suited to the learning of reading. The writer believes that most children would attain greater reading skill and more desire to use it if their attempts to read were deferred until they were approximately seven years old. Terman found that 33 per cent of the children rated as geniuses are from seven years to seven years and eleven months of age when in Grades I and II (4). The father (8) of a boy with an intelligence quotient of 192 reports that, when the son was six years and four months of age, he asked his father to read *to* him; at the age of seven years and six months the boy began reading to himself. Up to that time he accumulated experiences, ideas, interests, and a vocabulary, instead of wrestling with reading symbols. If these studies are representative of what should be expected of gifted children, it is illogical to require the usual child to begin reading even at six years of age.

FAVORABLE CONDITIONS FOR LEARNING

Even if a child has sufficient physical and mental maturity and the methods used to teach him to read are such as to induce effective habits of perception, synthesis, and apprehension, desirable learning can be prevented by unfortunate social and physical conditions. It has often been stated that children can learn in large classes as readily as in small classes, sometimes more readily. This statement may be true for some subjects and for certain age levels. Learning to read, however, is an accurate and detailed process. An adult does not find it as easy to learn to play bridge in a room with thirty-nine other players as in a room with three or seven. The reason is obvious. His perceptions are confused by many conflicting sights, sounds, and directions. He cannot know, while inexperienced, which of all the things that he sees and hears will increase his playing facility. Nor can a child in a room with thirty or forty other children successfully sort out, from all the sights and sounds beating on his senses, the few which will be effective in learning to read. It is significant that, in all remedial work, reading is taught in groups of five

and six children. Not only is it taught, it is usually *learned*. Again the reason is obvious. The number of perceptions induced is so limited that there is small chance of a child's learning the wrong thing; and, if he should, his teacher will know it before a fixed habit has grown. It would seem that classes of fewer than thirty, which could be divided into groups of six or eight, would induce more desirable learning in reading.

The physical conditions in a classroom may facilitate or inhibit desirable learning. Learning takes place all the time, but, if we are seeking selective learning, conditions conducive to such learning must be provided. Too much or too little light or light falling into the children's faces will interfere with correct visual perceptions; street and room noises, such as the noise of motors, bells, and ventilating fans, will confuse their auditory perceptions; and lack of space scatters their perceptions, for each child is so conscious of the children near him, of their possessions, movements, and behavior, that he cannot easily attend to the selected activities required of him. The powers of attention and application are also decreased by great heat and stale air.

CONCLUSION

In an address to the Association of Consulting Psychologists,[1] Gates said, "I am inclined to conclude that all but 3 or 4 per cent of children who now develop reading disabilities could, under conditions that could be realized, have learned successfully, in the first place."

It would seem that among the "conditions that could be realized" is a more general knowledge of how and when accurate and detailed perceptions can be roused and under what social and physical conditions the specific forms of perceptions and syntheses desired are likely to function. When such knowledge is applied to reading situations, children's perceptions will take on the desired impressions, and at least some apprehension of the right relations between the various elements of the sentence will follow.

[1] Reported in the *News Letter* of the association, March 5, 1935.

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THE VALUE OF HOME STUDY

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ARGUMENTS PRO AND CON

There are four criteria that might possibly be applied in judging the worth of home study as a scheme of school organization: (1) its effect on mastery of the subject matter and tool skills that are measured by standardized tests; (2) its effect on children's non-school learnings, including experiences both good and bad that come to them while they are seeing motion pictures, going for rides, drinking soda pop, or enjoying fireside family contacts; (3) its effect on the pupils' morale, character, and sense of responsibility; (4) its effect on parents' freedom, happiness, and opportunity to get worth-while experiences during the evenings.

Home study has long been an integral part of the school program. It is defended on a variety of grounds. Many parents feel that their children learn nothing if they bring no books home from school. If school is a place to recite, then when do children learn unless at home? Home work is supposed to affect the moral quality of pupils. Freedom at night cultivates lazy habits. A taste of evening leisure may make it hard for a pupil to buckle down to evening work later in high school, in college, or in a vocation that requires evening study and preparation for the next day's business. Adults in many callings are obliged to work or study at night in order to succeed, and pupils should become accustomed to doing so while they are in school. Struggling with lessons through the wee small hours is a good "discipline for the soul" and a builder of sturdy character. It is also an excellent type of competition with motion pictures, soda fountains, and the many other varieties of "running wild" that are available to young persons who have leisure. Such are the arguments advanced in favor of home study.

The movement to abolish home study has revealed another group of interesting factors and arguments. Economy in the purchase of textbooks has suggested that one set of books can be used by several different groups of pupils during a day and never be taken from the classroom, whereas home study requires a book for each child. There is opposition to home study because of the unfavorable conditions for study that prevail in many homes, where bad light, limited table space, radios, family conversation, and other factors interfere. Pupils also frequently confirm themselves in bad habits of work when they study at home, whereas at school their faulty techniques would be discovered and remedied much sooner. Parental freedom and leisure in the evening may be a decided hindrance to children's study, and children's study may be a serious limitation on parental freedom. Some parents are supposed to be overworked in their efforts to teach lessons to their children at home, and parents or older children often do the work for the pupils outright. Many times this help amounts to dishonest assistance, with the corresponding corruption of the pupils' morals. At the best, home assistance often involves a bad influence on learning because problems are solved for the child and he does not learn how to solve them for himself. Such are the arguments advanced by those who would abolish home study.

FACTS FROM AN EXPERIMENT

Let us now examine some actual facts based on a careful annual measurement of the achievement of all the children in Grades V–VIII in the El Segundo Grammar School over a three-year period with home study, followed by a three-year period without it. Carmichael measured results each year by means of the Stanford Achievement Test for a period of six years. Three of these years represented time during which the usual home study prevailed. Then home study was prohibited, and the same measurement program continued for three additional years. Grade-placement norms were used as a basis for the comparison of results during the six years involved in the study. These grade-placement norms were compared, not only on the basis of composite scores for the whole test, but also on the basis of the scores for the different parts of the test that were constant during the six-year period. It happened that the

Stanford test was revised during this time, with the addition of some parts and the elimination of others. It was thus impossible to compare all the parts, but the grade-placement norms that are used in this study are, according to the makers of the test, valid and comparable. Comparisons based on the composite test scores represent the best average for this study.

TABLE 1

GRADE PLACEMENT ON STANFORD ACHIEVEMENT TEST ADMINISTERED TO PUPILS FOR THREE YEARS WITH HOME STUDY AND FOR THREE YEARS AFTER HOME STUDY WAS ABOLISHED

Grade	Grade Placement		Difference	
	Average of Three Yearly Testings with Home Study	Average of Three Yearly Testings after Home Study Was Abolished	Expressed in School Years	Expressed in School Days
V B	5.63	5.37	0.26	52
V A	5.87	6.00	— .13	—26
VI B	6.77	6.37	.40	80
VI A	6.90	7.03	— .13	—26
VII B	7.60	7.73	— .13	—26
VII A	7.83	8.07	— .24	—48
VIII B	9.07	8.70	.37	74
VIII A	9.43	9.40	0.03	6
Average of grade averages	7.39	7.33	0.05	11
Average for all pupils in Grades V B–VIII A	7.37	7.33	0.04	8

It is naturally impossible to be sure that all conditions other than that of home work remained constant during the six-year period. Teachers and teaching efficiency remained very constant, in the judgment of the administrators involved, in all except one possible factor. The trend toward activity programs introduced a new element during the latter part of the six years, and its effect on the results is difficult to judge. Since, however, the activity approach is commonly criticized for its neglect of just such fundamental skills as are measured by the Stanford Achievement Test, it is reasonably safe to conclude that a showing in favor of home study is not due to this factor.

Tables 1 and 2 agree closely on the point that there is no significant difference between the achievement in the three years before and after home study was abolished. The net difference ranges from eight to thirteen days, according to the basis of calculation. Since this difference represents the change during the total time that home study was not used, with measurements after one, two, and three

TABLE 2

GRADE PLACEMENT ON SEPARATE PARTS OF STANFORD ACHIEVEMENT TEST EARNED BY PUPILS DURING THREE YEARS WITH HOME STUDY AND THREE YEARS AFTER HOME STUDY WAS ABOLISHED*

Test	Grade Placement		Difference	
	Average of Three Yearly Testings with Home Study	Average of Three Yearly Testings after Home Study Was Abolished	Expressed in School Years	Expressed in School Days
Paragraph meaning	7.70	7.70	0.00	0
Word meaning	7.27	7.50	— .23	—46
Spelling	7.17	6.93	.24	48
Language usage	7.73	7.63	.10	20
Literature	7.50	7.40	.10	20
History and civics	7.47	7.20	.27	54
Arithmetic reasoning	7.43	7.10	.33	66
Arithmetic computation	7.73	8.03	—0.30	—60
Average	7.50	7.44	0.06	13
Composite scores on whole test	7.37	7.33	0.04	8

* Because of revisions of the Stanford test, some portions of the test could not be compared, but the composite scores and the grade placements for the parts shown in this table are valid and comparable.

years, respectively, it is to be interpreted as a loss of eight to thirteen days in an average of two years of school time, or four to six days a year. This loss is obviously too small to be considered significant when account is taken of the fact that the school year may vary more than that because of holidays and other interruptions. When the data were analyzed graphically, it was impossible to visualize any difference whatsoever between the two periods. (The graphs are omitted from this article for economy of space.)

It will be noted that some grades and some skills showed higher or lower results than others. The range of variability among these factors may probably best be ascribed to differences among teachers

and differences in teacher emphasis on the different skills, rather than to any noticeable tendency for home work to be good in one grade and not in another or for home work to be effective in teaching arithmetic computation and not in teaching reasoning. The averages given in the tables are therefore more significant than the individual items within the tables.

Carmichael assembled some significant data regarding the effects of home work on high-school marks. During the first three years of the study ninety-three children who had been accustomed to home work left the El Segundo Grammar School and went to the El Segundo High School, where they earned average marks of 2.63, when expressed as grade points. During the last three years of the experiment 133 pupils who had not been accustomed to home work entered the high school and earned average marks of 2.22. When the difference (0.41) was interpreted in the light of standard deviations and standard errors, it proved to be 4.9 times its standard error—a ratio which represents chances of about two million to one that there was a significant causal factor other than errors of sampling. In other words, something caused a significant drop in the high-school marks of the graduates of the El Segundo Grammar School after home study in the grammar school was abolished. This drop could not have been caused by the lesser preparation of the pupils because their achievement had been shown to be equal on the Stanford Achievement Test. It is also known that the drop in school marks was not caused by a drop in the marks of the El Segundo High School as a whole because a check on this point showed the marks to be nearly constant during the six-year period.

These pupils suffered a relative slump as compared with other pupils who attended the El Segundo High School after having graduated from the elementary system under home study. What caused this slump? Since the pupils in the two groups were approximately equally well prepared from the standpoint of subject matter and skills, then the slump evidently resulted from differences in attitudes or habits of work. The pupils who had no home study for a period of time apparently had difficulty in getting down to it again when they entered high school. They had probably been spoiled by evening leisure so that they were not so punctual or dependable

about getting in assigned papers on time and, in general, probably failed to study as much as those who had been accustomed to evening study. If this interpretation is correct, it lends some support to the moral arguments stated earlier in this article. It of course raises the additional point of possible abandonment of home study in high school as well as in elementary school.

There is one loophole through which an advocate of abolishing home study could escape in his interpretation of these high-school marks. The lowered marks of the pupils who had no home study might conceivably result, not from their lesser mastery of high-school subjects, but from their lack of conformity to rules and assignments with respect to the time of handing in papers. If high-school home work were judged as an end in itself rather than as a means to real mastery of the fields taught, this interpretation might be in order. No data were available, however, on this point.

HOW TO GET GOOD RESULTS WITHOUT HOME STUDY

Carmichael's findings leave us somewhat in doubt as to the final answer but with a strong suspicion that pupils do not learn much as a result of home study. The much more important question is: How can the school program be revised so that good results can be obtained without resort to home study? Perhaps if the efficiency of school work were stepped up, the results could be increased infinitely more than they can by the very doubtful plan of sending children home to educate themselves as best they may. A few adjustments along these lines will be considered.

Longer school day.—It would seem entirely possible to add a few minutes or even an hour to the school day so that pupils could study under school guidance instead of adding the same hour on a "split-shift" basis, to be put in at home.

Better motivation.—If pupils could be taught more from interest and less from effort and duty, they could learn what they learn in a greatly reduced amount of time. Many school or home-study tasks are performed on a basis of drudgery rather than interest. Without motivation there is no learning. If home study were materially increased and the school day materially lengthened, there would still

be little increase in real learning products unless there was motivation.

Adjustment of work to child maturation.—A great deal of time is consumed trying to teach children what they are too young or too immature to learn. A concept in arithmetic or grammar which is next to impossible for a child in Grade IV to master may be grasped quickly when the child is a year older. If educators were only more willing to wait until the child is ready for learning or if they were more willing to adapt the program to the child's maturation, they would save hours of bungling and struggling, either at home or at school, with tasks that are impossible because they are approached prematurely.

More actual teaching at school.—It is proverbial that many teachers spend their time in lesson-hearing and in testing the pupils' preparation instead of *teaching*. If home work were abolished and the class time were used for actual teaching instead of testing, the learning process at school might be so greatly intensified that home study would be unnecessary.

Teaching how to study.—Home study involves *studying*, with little progress in *learning how to study*. Pupils struggle along blindly without improving their techniques. If more attention were devoted during the school day to making pupils conscious of their work methods and to the formation of efficient and economical study habits, the learning product could be tremendously increased and the learning time greatly reduced.

SUMMARY

This study revealed no significant difference in scores on the Stanford Achievement Test in Grades V–VIII during three years with home study and three years after home study was abolished. The pupils without home study, however, although equally well prepared in subject matter, suffered a drop in high-school marks to the extent of 0.41 of a mark, which was highly significant from a statistical viewpoint. This finding suggests strongly the interpretation that evening leisure once enjoyed is hard to give up or that, if home study is once abolished, the pupil has difficulty in returning to it.

PHONIC READINESS

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The idea has become commonly accepted that the child cannot begin to learn to read until he has reached a certain degree of mental maturity. That mental maturity has been called "reading readiness"; it is chiefly "school readiness" plus the ability to acquire a sight vocabulary, that is, to associate word sounds with word forms. When a child can make such associations under classroom conditions, he can begin learning to read. When he has accumulated a sight vocabulary of the most common words, he can actually read books if they are strictly limited to the simplest vocabulary. Thus, with sight learning of common words and with vocabulary control in reading materials, teachers can secure what is typically first-grade reading.

Schoolbooks do not, however, remain limited to the sight vocabulary of the first-grade pupil. New words must come in daily and at an ever-increasing rate. At the same time the amount of repetition of new words steadily decreases. As the number of words becomes greater, the appearance of the words becomes more and more similar. All these conditions—greater number, less repetition, and greater similarity of words—demand something more than the sight method of learning. They demand what is called "independence in word recognition," and that means some sort of phonic attack.

Phonic attack must come—but when? The general agreement is that it must follow some certain amount of sight recognition. Phonic attack means the use of generalizations about how letters are sounded. Inductive teaching has been found to be most effective; the teacher puts together words with similar letter sounds and leads the child to note the similarity. After the child has perceived that four or five words beginning with a certain sound begin with the same letter, he is supposed to have learned the generalization that all

words beginning with that letter begin with the associated sound, and he is supposed to use this generalization in new word situations.

It is true that the use of phonics means the use of generalizations, that generalizations are best learned inductively, and that sight words are the basis of inductive reasoning. Do these facts mean that, as soon as the pupil has learned a few similar sight words, he can go right ahead with phonics? Actual classroom experience leads to the questioning of such a conclusion. Dozens of sight words of similar sound can be taught; the children can be led carefully through the process of inductive reasoning; and still many of the pupils simply do not understand phonics. The best teachers as well as average teachers have this experience. Some factor seems to have been neglected.

Studies have been made of the sight words needed and of the methods necessary for inductive teaching, but little attention has been paid to the mental abilities which the child himself uses in the process. To learn phonic analysis of words and to use the results of such analysis surely requires more mental ability than that used in sight recognition or, at least, a different type of mental ability. Experience in teaching indicates that this conclusion is correct. Learning of phonics comes later than the sight learning of words by a greater or a less interval. Some children use phonics to some extent in Grade I; other children learn to do so in Grade II; and still others do not seem to secure an understanding of phonics until Grade III. These facts show that some factor is operating other than material or teaching method.

One hypothesis is that the ability to learn and to use principles of phonics is closely connected with the increase in mental age. General reading readiness, which is largely readiness for the sight learning of words, is generally supposed to be attained at the mental age of about six years. The school experience just cited suggests that phonic readiness comes at some time later than sight readiness. Then it may come later than the mental age of six. To try out this hypothesis, an experiment was conducted in the first two grades of a school in which the teaching of phonics had been uniform for at least two years and in which phonics had had some emphasis, though not an unusual amount. The plan was simply to measure,

first, the children's mental development and, second, their phonic attainment, and to see whether one was in any way related to the other. About May 1, 1935, the Pintner-Cunningham Primary Mental Test was given to the children in each of the two grades. In the previous September the first-grade pupils had been given the Detroit First-Grade Intelligence Test, and the year before that the pupils now in Grade II had been given the Pintner-Cunningham Primary Mental Test. Results from these previous tests were roughly brought up to date by the addition of the number of months from the time of giving the test to May 1. Thus mental ages for the pupils of both grades were secured from the average of two group tests. It must be understood that these results could not give anything like the accuracy which individual intelligence tests would make possible.

The phonic achievement in these two grades was determined by the use of experimental issues of Tests 1 and 2 of the Basic Reading Tests, Word-Attack Series.[1] Test 1 of this series consists of words containing only the short vowels, preceded and followed by a single consonant. Each test word is in a line with three other words or word-like forms, each of which differs in only one letter from the test word. Hence the word wholes look so much alike that recognition by the method of pure sight is difficult for a beginner, and the child is usually compelled to sound out the forms in order to find the right form pronounced for him by the tester. Test 2 is of similar construction except that some of the test words contain short vowels and some long vowels with final *e* and that many words also contain consonant blends or consonant digraphs. In both tests sight knowledge is rendered largely useless by the great similarity of the word forms. In addition, the words in the test are familiar to children by meaning, but they do not appear on lists of words common to primary reading books. In Grade II the scores on the two phonic tests were averaged to give each child's phonic achievement. In Grade I only the easier test was used.

Because the second-grade group had had more teaching than

[1] The Word-Attack Series of the Dolch-Gray Basic Reading Tests are published by Scott, Foresman and Company, Chicago, Illinois. They are group tests measuring three degrees of ability in sounding attack on new words.

Grade I, the groups could not be combined, but it may be assumed that the material and teaching factors for the members of any one group were practically constant. Therefore, for each group the mental age and the phonic achievement were correlated by the Pearson product-moment method. As a check on the results, the experiment was repeated in May, 1936. There was marked agreement between the results of the two experiments, as is shown in Table 1.

When consideration is given to the difficulty of accurate measurement of young children in both the fields concerned, the relation between mental maturity and the use of phonics is remarkably high.

TABLE 1

CORRELATION OF MENTAL AGE AND PHONIC ACHIEVEMENT OF PUPILS IN GRADES I AND II IN TWO SCHOOL YEARS

Grade	Number of Pupils	Correlation
I (first year)	30	.412 ± .102
I (second year)	24	.472 ± .106
II (first year)	28	.516 ± .096
II (second year)	33	.406 ± .098

The scattergrams made from the scores show a further significant fact: children of high mental age sometimes fail to acquire phonic ability but children of low mental age are certain to fail. The scattergrams seem to show the thing in which we are perhaps most interested, namely, the minimum age for phonic readiness. Children with mental ages below seven years made only chance scores; that is, as far as this experiment indicates, a mental age of seven years seems to be the lowest at which a child can be expected to use phonics, even in the simple situations provided by these two tests.

It has always been known that some first-grade pupils learned to use phonics, but it is also known that many children reach a mental age of seven years before the end of Grade I. Most of the others, though not all, reach the mental age of seven years in Grade II. These results seem therefore to check with school experience. They do not tell, however, exactly when the teaching of phonics should be

started. Ear-training, which is the basis of phonics, may begin early. Children may be taught to notice the similarities between sounds some time before they are expected actually to use sounding generalizations. This study does suggest, however, that the schools are perhaps expecting results from phonic-teaching far too soon.

This experiment deals with the relation between the use of phonics and the general maturity shown by an intelligence test. It is probable that phonics involves certain elements of general maturity, for instance, perception of similarities, auditory imagery, application of generalizations, and the like. Further studies are needed to discover such particular abilities, their development, and their function in the use of phonics. Meanwhile, ways of determining general mental maturity are available, and practical use can be made of the concept of phonic readiness here explained.

SOME ECONOMIC ASPECTS OF ATTENDANCE AT A TEACHERS' COLLEGE

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Various studies have shown that students in teachers' colleges are drawn chiefly from the great middle class of society and from homes that are not favored economically. For example, Moffett,[1] in a study of 1,080 women students in fifteen representative teachers' colleges in various sections of the United States, found that the father of a typical student was the manager of a small business, a skilled workman, or a farmer, with a median annual income of $2,305. Studies conducted in nine states since 1921[2] have revealed practically the same findings as those of Moffet. The median income of the parents of the students reporting varied from $1,775 to $3,321 annually. In five states from 39 to 60 per cent of the students were wholly dependent on their parents for support, and in many cases support was given at undue sacrifice. The other students depended wholly or in part on their savings and earnings or on borrowing.

Since prospective teachers are recruited largely from homes where parental incomes are decidedly modest, it is not surprising that free state institutions for teacher education have been established. These institutions have come to serve not only prospective teachers but also students who desire a general education and whose limited resources would make it impossible for them to attend most of the other types of institutions of higher learning.

In view of this situation it is worth while to ascertain the cost of attending a state teachers' college and to find the ways in which students obtain money for financing their education. This article gives

[1] M'Ledge Moffett, *The Social Background and Activities of Teachers College Students.* Teachers College Contributions to Education, No. 375. New York: Teachers College, Columbia University, 1929.

[2] Benjamin W. Frazier and Others, *Special Survey Studies*, p. 162. National Survey of the Education of Teachers, Vol. V. Office of Education Bulletin No. 10, 1933.

information which was obtained on these two points from 767 students (437 women and 330 men) enrolled in the Eastern Illinois State Teachers College in the winter quarter of 1935–36.

This group of students was probably typical of the student bodies of many state teachers' colleges. Nearly half of them reported that their fathers were farmers. Many of them came from homes that were not economically favored. They stated frankly that one of their leading reasons for attending this college was the fact that it is inexpensive.

The students were asked to answer the following questions concerning some of the economic aspects of attendance at this college.

1. About what do you expect your expenses to be for the nine-month school year? (Include only room, board, and school fees.)

2. About what percentage of the money you are using for your expenses comes from the following sources? (Your total from all sources should be 100 per cent.) (*a*) Father or mother, (*b*) brother or sister, (*c*) other relatives, (*d*) borrowing, (*e*) scholarship, (*f*) your own savings, (*g*) your earnings while attending college, (*h*) other sources (list them).

3. If you are earning part or all of your expenses while attending college, what kind (or kinds) of work are you doing?

There were two reasons why only these items were included: First, it was assumed that most students could accurately estimate these expenses. Second, they ordinarily constitute the major expenditures for most of the students in this college. Minimum fees are $18.50 a quarter, and they include registration, student-activity fee, library fee, supplies, locker and gymnasium fee, and book-rental fee. Tuition is free to legal residents of Illinois who agree to teach in the public schools of the state for a period equal to the time spent in this college.

From Table 1 it will be seen that 52.9 per cent of the students spent less than $200 for room, board, and school fees and that only 8.4 per cent spent $300 or more a year. The median was $182.55. One reason for such low expenses was the fact that 22 per cent of the students lived within five miles of the college, and most of these lived at home and did not pay for room and board. Another reason for low expenses was the fact that a large number of students, men as well as women, did light housekeeping, many of them bringing most of their supplies from home each week. Still another reason may

have been the fact that 94 per cent of the students lived within one hundred miles of Charleston, and many of those who did not live at home remained in Charleston only from Monday morning until Friday afternoon. While the students may in some instances have spent as much for traveling as they would have spent for meals had they remained in Charleston, this expenditure was not, of course, asked for in the students' estimates of expenses. As a matter of fact, traveling expenses were slight for many of the students because they depended not a little on the generosity of motorists for transportation.

TABLE 1

EXPENDITURES FOR ROOM, BOARD, AND SCHOOL FEES FOR NINE MONTHS OF 767 STUDENTS ENROLLED IN EASTERN ILLINOIS STATE TEACHERS COLLEGE IN 1935–36

Expenditures	Number of Students	Percentage of Students
$400–449	15	2.0
350–399	7	0.9
300–349	42	5.5
250–299	103	13.4
200–249	145	18.9
150–199	205	26.7
100–149	79	10.3
50–99	122	15.9
Not given	49	6.4
Total	767	100.0

From Table 2 it will be noted that the three most frequently mentioned sources from which students obtained money for attending college were father or mother, the student's earnings while in college, and the student's savings. Of the 767 students who answered the questionnaire, 79.4 per cent received money from their parents; and 68.6 per cent of this number obtained more than 50 per cent of their money from this source. Two hundred and seventy-two students (35.5 per cent) earned part of their money while attending college, and 48.9 per cent of this group earned more than half of their expenses. One hundred and ninety students (24.8 per cent) depended wholly or in part on their savings; 26.3 per cent of these obtained more than 50 per cent of their money from this source.

Students who were working while in college mentioned thirty-eight ways in which they earned money. Ways mentioned five times or more, together with the frequency of mention of each, were as follows: National Youth Administration, 109; housework, 27; clerking in a store, 20; office-work, 16; work in the college library, 13; work in restaurant, 8; janitorial work, 7; driving a truck, 6; laboratory assistant, 5.

TABLE 2

DISTRIBUTION OF SOURCES FROM WHICH MONEY FOR COLLEGE EXPENSES WAS OBTAINED ACCORDING TO FREQUENCY OF MENTION BY 767 STUDENTS ENROLLED IN EASTERN ILLINOIS STATE TEACHERS COLLEGE IN 1935–36

Source of Money	Mentioned as Source of 51–100 Per Cent of Expenses		Mentioned as Source of 1–50 Per Cent of Expenses		Total	
	Frequency	Per Cent	Frequency	Per Cent	Frequency	Per Cent
Father or mother	418	68.6	191	31.4	609	100.0
Earnings	133	48.9	139	51.1	272	100.0
Savings	50	26.3	140	73.7	190	100.0
Brothers or sisters	25	16.3	128	83.7	153	100.0
Borrowing	27	31.8	58	68.2	85	100.0
Scholarships	3	3.7	79	96.3	82	100.0
Other relatives	7	21.2	26	78.8	33	100.0
Other sources	15	46.9	17	53.1	32	100.0

CONCLUSION

Any teachers' college with students coming from homes not economically favored must endeavor to meet the problems growing out of this situation, among which are the following: (*a*) assisting deserving students to secure suitable employment; (*b*) supervising housing conditions; (*c*) encouraging co-operative housing and dining-service projects; (*d*) supervising conditions under which students work; (*e*) providing loan funds and scholarships; (*f*) providing adequate counseling service, with particular attention to the problems of the working student; (*g*) aiding students in coming into contact with some of the cultural and social opportunities of which they may have been deprived in their pre-college years.

SELECTED REFERENCES ON ELEMENTARY-SCHOOL INSTRUCTION

III. The Subject Fields—Continued

This list of references is the third of the annual series relating to instruction at the elementary-school level. The first list contains items on the curriculum, methods of teaching and study, and supervision. The second list contains items grouped under the following subject fields: reading, English, spelling, handwriting, the social sciences, and geography. The present list covers the remaining subject fields at the elementary-school level and is the last of the series of three dealing with elementary-school instruction.

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[1] See also Items 209 (Breed and Ralston), 219 (Reid), and 222 (Wahlstrom) in the list of selected references appearing in the April, 1937, number of the *Elementary School Journal* and Item 408 (Connor and Hawkins) in the September, 1937, number of the *Elementary School Journal*.

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562. JUDD, CHARLES H. "Arithmetic in the Elementary School," *International Understanding through the Public-School Curriculum*, pp. 79–84. Thirty-sixth Yearbook of the National Society for the Study of Education, Part II. Bloomington, Illinois: Public School Publishing Co., 1937.

A critical discussion of the general values of arithmetic.

563. KNIGHT, F. B. "A Report of Four Studies in Arithmetic," *Journal of Educational Research*, XXX (January, 1937), 325–40.

Studies deal with (1) perceptual value of various configurations of numbers, (2) tridimensional space in primary arithmetic, (3) verbal problems, and (4) illustrations in arithmetic textbooks.

564. MACLATCHY, JOSEPHINE H. "Reclaiming the 'Counter,' " *Educational Research Bulletin*, XVI (April 14, 1937), 85–90.

An analysis of the habit of counting when adding.

565. MARGUERITE, SISTER M. "The Development of Arithmetic as a School Subject," *Catholic Educational Review*, XXXIV (November, 1936), 536–52; "The Influence of Pestalozzi on Early American Arithmetic Texts," ———, XXXIV (December, 1936), 577–88; "Formalization of Arithmetic in the United States, 1860–1890," ———, XXXV (January, 1937), 28–34; "Recent Trends in Arithmetic," ———, XXXV (March, 1937), 159–70; "Reaction against Formalism in Arithmetic, 1890–1919," ———, XXXV (April, 1937), 225–36; "Aims in Arithmetic," ———, XXXV (May, 1937), 284–93.

A series of six critical papers, each accompanied by a bibliography.

566. MORFITT, MARGARET D. K. "Comparison of Individual-concrete Methods and Class Methods in the Teaching of Arithmetic," *British Journal of Educational Psychology*, VII (June, 1937, Part II), 196–203.

Shows the effect of method of teaching (1) on estimating number of spots on a page and (2) on abstract multiplication.

567. *The Place of Mathematics in Modern Education*. Eleventh Yearbook of the National Council of Teachers of Mathematics. New York: Teachers College, Columbia University, 1936. Pp. vi+258.

A series of eight critical papers on the place of arithmetic in the schools.

568. RANDALL, JOSEPH H. "Corrective Arithmetic in Junior High School," *Educational Method*, XVI (January, 1937), 182–85.

Gives the results of an experiment in remedial arithmetic in the junior high school.

569. ROBINSON, ARTHUR E. *The Professional Education of Elementary Teachers in the Field of Arithmetic*. Teachers College Contributions to Education, No. 672. New York: Teachers College, Columbia University, 1936. Pp. vi+193.

A careful report presenting new data on several aspects of preparing teachers of arithmetic.

570. ROGERS, C. F. "Arithmetic and Emotional Difficulties in Some University Students," *Mathematics Teacher*, XXX (January, 1937), 3–9.

A discussion of the possible relation of deficiency in arithmetic to later emotional difficulties.

571. RUCH, G. M., KNIGHT, F. B., OLANDER, E. A., and RUSSELL, G. E. *Schemata for the Analysis of Drill in Fractions*. Educational Psychology Series, No. 3. University of Iowa Studies in Education, Vol. X, No. 2. Iowa City, Iowa: University of Iowa, 1936. Pp. 58.

Presents a systematic general pattern for drill in fractions.

572. SCHORLING, RALEIGH. *The Teaching of Mathematics*. Ann Arbor, Michigan: Ann Arbor Press, 1936. Pp. viii+248.

Contains several excellent chapters dealing with problems of teaching arithmetic.

573. SMITH, DAVID EUGENE. *The Wonderful Wonders of One-Two-Three.* New York: McFarlane, Warde, McFarlane, 1937. Pp. 48.

A fine example of the possibilities of cultural content in arithmetic for the middle grades.

574. SPENCER, PETER L. "Arithmetic: A Basic Social Study," *California Journal of Elementary Education*, V (February, 1937), 144–52.

A critical discussion of the arithmetic program.

575. TAYLOR, E. H. "Preparation of Teachers of Arithmetic in Teachers Colleges," *Mathematics Teacher*, XXX (January, 1937), 10–14.

Presents data showing deficiencies in arithmetic of prospective teachers.

576. WASHBURNE, CARLETON. "Functional Arithmetic," *Educational Method*, XVI (January, 1937), 167–70.

A critical discussion of the bases for selecting arithmetical content.

577. WETHERINGTON, JULIA. "Grade Placement of the Content of Arithmetic," *Elementary School Journal*, XXXVII (September, 1936), 41–46.

An analysis of ten courses of study.

578. WILLIAMS, CLAUDE L., and WHITAKER, RUTH L. "Diagnosis of Arithmetic Difficulties," *Elementary School Journal*, XXXVII (April, 1937), 592–600.

Reports results of individual diagnoses of pupils in Grades IV–VIII.

579. WILSON, DOROTHY W. "Teaching Denominate Numbers and Measures," *Educational Method*, XVI (January, 1937), 177–81.

Gives data showing knowledge of various units of measure. Based on a group of 2,819 children and adults.

580. WILSON, GUY M. "Corrective Load in the Fundamentals of Arithmetic in Grades VI, VII, and VIII," *The Role of Research in Educational Progress*, pp. 234–41. Official Report of the American Educational Research Association, 1937. Washington: American Educational Research Association of the National Education Association, 1937.

Shows the inadequacy of drill on fundamental processes and the need for corrective teaching.

581. WILSON, GUY M., and DALRYMPLE, CHARLES O. "Useful Fractions," *Journal of Educational Research*, XXX (January, 1937), 341–47.

A study of frequency of occurrence of fractions.

582. WILSON, GUY M., and PORTER, EVERETT R. "In the Useful Fundamentals of Arithmetic Is It Possible To Overcome Temporary Lapses in Ability Leading to Steady Increase in Error?" *Journal of Experimental Education*, V (September, 1936), 71–74.

An attempt to check the study by Knight and Ford ("Temporary Lapses in Ability and Error in Arithmetic," *Elementary School Journal*, XXXII [October, 1931], 111–24), which dealt with some causes of error in multiplication.

583. YELDHAM, FLORENCE A. *Teaching of Arithmetic through Four Hundred Years (1535–1935)*. London: George G. Harrap & Co., Ltd., 1936. Pp. 144.

A brief historical survey.

SCIENCE

WARREN W. MCSPADDEN
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This bibliography on science in the elementary school includes articles, brochures, research studies, and books published during the interval of June, 1936, to June, 1937. This interval has been comparatively productive of well-thought-out materials that either are research or are using the findings of research. One notes that increasing emphasis is being placed on the development of content which is within the child's range of interest and experience. Such phrases as "discovery of how things work by actually working with the materials" are more common than formerly. One notes also the emphasis that is being given to the development of critical thinking and scientific attitudes in young children through their science work. More and more materials offer opportunity for children to participate in directing instruction. This reviewer is glad to report the almost complete absence of controversial issues that have so long acted as barriers to the development of science in the elementary school.

584. ARNOLD, HERBERT J. *The Selection, Organization, and Evaluation of Localities Available for Unspecialized Field Work in Earth Science in the New York City Region*. New York: Teachers College, Columbia University, 1936. Pp. vi+230.

A Doctor's dissertation in the nature of a fieldbook on earth science. Teachers in the New York City region will find it of particular value in field excursions. This study will be helpful to workers in other localities as an illustration of techniques that might be applied in other regions. Many of the generalizations from the field of geology presented in the study have application in the elementary school and may be used in curriculum construction.

585. BEAUCHAMP, WILBUR L., FOGG, HARRIET M., CRAMPTON, GERTRUDE, and GRAY, WILLIAM S. *Science Stories*, Book III. Chicago: Scott, Foresman & Co., 1936. Pp. 256.

The third book in a series of readers in elementary-school science.

586. BRUCE, G. V. "Elementary School Science References and Instructional Materials," *Science Education*, XXI (February, 1937), 31–34.

A very complete bibliography of reference materials in science for children. Covers the fields of astronomy, geology, and weather.

587. CRAIG, GERALD S. "Science in the Elementary School," *International Understanding through the Public-School Curriculum*, pp. 177–84. Thirty-sixth Yearbook of the National Society for the Study of Education, Part II. Bloomington, Illinois: Public School Publishing Co., 1937.

A discussion of the role that science can play in the development of desirable social attitudes. The author shows that scientific knowledge is international in origin and scope and that much of the content of elementary-school science may be used to develop international understanding. Five illustrative centers of interest in science that might be used to this end are included.

588. CRAIG, GERALD S. "Science and Elementary Education," *Teachers College Record*, XXXVIII (May, 1937), 660–77. (Free reprints available to teachers from Ginn & Co.)

A discussion of the place of science in the changing conception of elementary education. Values for the teacher are stressed. "If the teacher thinks deeply into the educational values, the instruction is more likely to be well poised, balanced, and challenging. In this sense, the values in education a teacher accepts may be as significant in instruction as the content involved." In developing this theme, the author clearly defines the role of the conception in science and shows by illustration how it may grow in the child's understanding through the elementary-school years.

589. CROXTON, W. C. *Science in the Elementary School*. New York: McGraw-Hill Book Co., Inc., 1937. Pp. xii+454.

A textbook on the teaching of science in the elementary school. Part I consists of eight chapters on the place of science in the elementary school, methods of teaching, research contributions, etc. Part II, the major portion of the book, consists of suggestions for an activity program. These activities are intended as source materials for the teacher and are organized according to seasonal use. This reviewer wishes that more activities from the physical-science fields had been included.

590. CUMBERLAND, MARYELLEN. "Soils," *Grade Teacher*, LIV (November, 1936), 16–17, 53.

A description of a unit, with outline, on soil erosion and soil conservation.

591. CURTIS, FRANCIS D. "Some Exercises Designed for Teaching Scientific Attitudes in the Intermediate Grades," *NCES News Notes*, IV (May, 1937), 173–77. Salem, Massachusetts: National Council on Elementary Science (W. G. Whitman, Managing Editor, % State Teachers College).

An interesting account of several activities designed to teach scientific attitudes to children in the elementary school. There will be few teachers who, after reading this article, will not want to try out these or similar exercises in their own classes.

592. EASTLACK, LOLA F. "A Sixth-Grade Unit in Astronomy," *Science Education*, XXI (February, 1937), 24–27.

A description of a unit in Grade VI of an elementary school in Washington, D.C.

593. FRUTCHEY, FRED P. "Evaluation in Elementary School Science," *Educational Method*, XVI (May, 1937), 422–26.

A discussion of some of the problems encountered in the critical evaluation of the science work in the elementary school. Four steps in the evaluation program set forth are considered: formulating the objectives of teaching, clarifying the objectives by expressing their meaning in terms of pupil behavior, obtaining a record of pupil behavior, and interpreting the behavior.

594. GARVEY, MARY L. "Shadows Are Like Clocks and Calendars," *Science Education*, XX (December, 1936), 196–99.

An interesting presentation of science activities for Grade I in a Minneapolis school.

595. HETHERSHAW, LILLIAN. "How Seeds Are Scattered," *School Science and Mathematics*, XXXVI (October, 1936), 708–14.

A discussion of seed dispersal, with much factual material and suggestions on how it may be used with children.

596. HULTZ, HELEN LORRAINE. "Mushrooms: A Third-Grade Project," *Science Education*, XXI (February, 1937), 17–21.

A description of a project in science with Grade III in the Fox Meadow School, Scarsdale, New York.

597. LAMMEL, ROSE. "Science as a Part of Living in the Elementary School," *Educational Method*, XVI (May, 1937), 417–21.

An account of the place of science in the University Elementary School of the Ohio State University and of how science experiences are giving children the opportunity to recognize problems, to relate those problems to larger problems and activities, to develop means of solution, and to recognize the applications of this scientific principle to other problems.

598. NEUNER, ELSIE FLINT. "The Science Room in Elementary Schools," *Educational Method*, XVI (May, 1937), 432–34.

A practical account of the uses to which the special science rooms are put in the elementary schools of New Rochelle, New York.

599. PALMER, E. LAURENCE. "A Comparative Study of Nature Education Philosophies," *School Science and Mathematics*, XXXVI (November, 1936), 897–906.

Presents some of the points of difference between nature-study and elementary science.

600. PODENDORF, ILLA. "Man's Use of Rocks and Minerals from Our Earth," *School Science and Mathematics*, XXXVII (March, 1937), 280–82.

An outline and description of a unit of instruction in Grade IV at Newton, Iowa.

601. POWERS, SAMUEL RALPH. "Influences of Science on Human Activities with Implications for Education," *Educational Method*, XVI (May, 1937), 395–401.

A presentation of some of the major social changes that science and technology have brought about and a consideration of these changes in terms of human desires and activities resulting from these desires. After considering the various areas of thought influencing intellectual life, the author deals in some detail with the contributions from the field of science that have influenced and are still influencing man's intellectual progress. While this article is not especially directed to workers in science at the elementary-school level, it nonetheless has implications for these workers.

602. *Science Guide for Elementary Schools*, Vol. III. Sacramento, California: California State Department of Education, 1936–37.

A series of ten science guides prepared by specialists in the state teachers' colleges with the co-operation of classroom teachers. The guides are published monthly from August to May, inclusive, and the subscription price is $1.25 a year.

603. SELBERG, EDITH M., and BARNARD, J. DARREL. "Teaching Pupils the Method of Solving Problems," *Educational Method*, XVI (May, 1937), 413–16.

"If the individual is to take part in the planning of his social destiny and if he is to become an independent thinker, he should be allowed and encouraged to do his own planning for the solution of the problems that originate with him." The authors offer concrete assistance to teachers on how this objective might better be realized. Teachers who have a progressive point of view and who question the "unit of instruction" will find in this article a reasonable means of developing and using the unit.

604. WRIGHT, MARY H. "Coal and Its By-products," *Grade Teacher*, LIV (January, 1937), 14–15.

A description of a science-geography unit for the intermediate grades.

MUSIC[1]

ANNE E. PIERCE
University of Iowa

605. *Course of Study in Music for Rural Schools*. Music Education Research Council Bulletin No. 19. Chicago: Music Educators National Conference (64 East Jackson Boulevard), 1936. Pp. 18.

Although this course was constructed primarily for rural schools, it is useful for small urban systems. The bulletin contains a brief general statement of the status of music education in rural schools; aims of music education; vocal music;

[1] See also Item 448 (Seashore) in the list of selected references appearing in the September, 1937, number of the *School Review*.

instrumental music; interschool musical activities; circuit music teachers; and guidance through, and use of, phonograph and radio. It also describes aims, procedures, and materials of different phases of instruction.

606. FUNKHOUSER, MARGARET. "Music at Shady Hill School," *Progressive Education*, XIV (April, 1937), 243–45.

Discusses plans and procedures of a course in music for boys and girls ranging in age from five to fifteen years. Activities described are vocal, instrumental, appreciational, and rhythmical in nature.

607. GARTH, THOMAS R., and CANDOR, ETHEL. "Musical Talent of Mexicans," *American Journal of Psychology*, XLIX (April, 1937), 298–301.

A résumé of an experiment to discover whether some races are more musical than others. Findings were based on results of the Seashore Measures of Musical Talent, which, according to the investigators, revealed that Mexicans are inferior to whites in sense of pitch but superior in sense of rhythm.

608. GEHRKENS, KARL W. "A Course of Study in Music—Grades 1, 2, 3," *Music Educators Journal*, XXIII (September, 1936), 27–30.

The first report of a course of study in music for all grades from preschool and kindergarten to final years of senior high school now being constructed by the Research Council of the Music Educators National Conference. The present article deals with objectives, voice, rhythm, attitude, appreciation, sight singing, ways and means of attaining objectives, evidences of growth and achievement, correlation and integration, individual differences of pupils, and materials.

609. HENRICKSON, VELMA W. "Enriching the School Program with Creative Music," *Music Educators Journal*, XXIII (September, 1936), 31–33.

A report of a project in creative music in which classroom teachers co-operated with the special music, or "key," teacher to develop original melody-making by young boys and girls.

610. HIGGINSON, J. H. "The Associational Aspect of Musical Response in School Children," *Journal of Educational Psychology*, XXVII (November, 1936), 572–80.

An experiment, dealing with 210 boys of ten to fourteen years of age, to ascertain nature of associations formed when listening to instrumental music of various types. Results indicate that there are generally associations both relevant and irrelevant to the music. The cinema is a potent factor in the affective development of the child.

611. *Music Supervision in the Public Schools*. Music Education Research Bulletin No. 18. Chicago: Music Educators National Conference (64 East Jackson Boulevard), 1936. Pp. 10.

Gives an overview of supervision in music in public education. Part I deals with origins, trends, functions, and characteristics of supervision. Part II discusses the forms of organization and the function of the administrator and supervisor and gives illustrative types of supervisory programs.

612. PAINTER, FLORENCE M. "An Experiment in Character Education through Musical Experience," *Educational Method*, XVI (April, 1937), 363–68.

Tells how music in a school in Washington is used to preserve individuality of children and to help each child achieve the best development of his own character.

613. SEASHORE, CARL E. "The Psychology of Music. V, Measurement of Musical Talent: The Eastman Experiment," *Music Educators Journal*, XXIII (December, 1936), 24–25.

An appraisal and an explanation of the plan by the originator. Gives practical suggestions to teachers and parents on how findings of the Seashore Measures of Musical Talent may be used.

614. SMITH, RUSSELL B. "A Basic Concept for Music Education," *Music Educators Journal*, XXIII (October, 1936), 19, 28.

Presents an evaluation of traditional teaching procedures, with suggestions on how music instruction may be improved.

615. SWISHER, AMY M., and KELLER, EDITH M. *Art and Music Education*. Columbus, Ohio: Ohio Congress of Parents and Teachers (Edith M. Keller, % State Department of Education), 1937. Pp. 20.

The second part of the monograph deals with music education. Discusses adult participation in music and support of music education in the schools and gives a good list of suggested music materials for choral work at various levels of instruction.

ART[1]

W. G. WHITFORD

616. *Art Education Today*. Sponsored by Members of the Fine Arts Staff of Teachers College, Columbia University. New York: Teachers College, Columbia University, 1937. Pp. 100.

The third issue of the annual publication dedicated to the memory of Arthur W. Dow. Discusses theories and practices of art education in various schools and summarizes trends in art education.

617. CLARK, CLYDE C. *Modern Pioneers*. Dallas, Texas: Practical Drawing Co., 1936. Pp. 302.

Discusses practical applications of the arts and crafts in homes, schools, and communities, particularly in small towns and rural districts.

618. HUNGERLAND, HELMUT. "Self-discovery through Painting and Drawing," *Progressive Education*, XIV (April, 1937), 260–67.

[1] See also Item 216 (Miller) in the list of selected references appearing in the April, 1937, number of the *Elementary School Journal* and Item 337 (Meier) in the May, 1937, number of the *School Review*.

Discusses the development of children, as revealed through studies of their drawings and paintings, in a small private suburban school of Berlin, Germany.

619. MERRY, RUTH C. "Enjoyment of Art in Everyday Life," *School Arts Magazine*, XXXVI (March, 1937), 389–91.

An interesting discussion of art as a phase of living, from the appreciative approach, from the creative approach, and from a combination of both.

620. MITCHELL, EDITH L., and SMITH, J. B. "Curriculum Investigations: Art." *Review of Educational Research*, VII (April, 1937), 128–30, 189–91.

Summmarizes outstanding investigations in the field of the art curriculum and related art subjects. Presents a bibliography of sixty-four topics pertaining to the field of curriculum development in the arts.

621. MUNRO, THOMAS. "Art Museum Work with Children." *School Arts Magazine*, XXXVI (October, 1936), 122–24.

Discusses types of art work which children enjoy in an art museum and methods for developing an understanding and appreciation of the objects observed.

622. NARAMORE, ELISABETH. *William and His Friends*. New York: Viking Press, 1936.

A picture-book for children showing twenty-seven animal figures, some sculptured and others of blown glass and wrought iron, from the Metropolitan Museum of Art, New York City. A brief explanation accompanies each figure or group of figures.

623. NICHOLAS, FLORENCE WILLIAMS; MAWHOOD, NELLIE CLARE; and TRILLING, MABEL B. *Art Activities in the Modern School*. New York: Macmillan Co., 1937. Pp. xvi+380.

Methods, devices, and techniques, with emphasis on educational principles, are interpreted in terms of art-teaching. Art experiences from the kindergarten through the high school are included. Supplies an excellent bibliography.

624. PERRINE, VAN DEARING. *Let the Child Draw*. New York: Frederick A. Stokes Co., 1936. Pp. 88.

A book for parents and educators dealing with the expressive ability of children through drawing. Furnishes a "guide that enables them to recognize the values of a child's efforts to draw and to enrich the lives and characters of their children through understanding encouragement of this instinctive urge."

625. RAYNER, EDWIN. *Famous Statues and Their Stories*. New York: Grosset & Dunlap, 1936. Pp. 80.

Presents a comprehensive yet brief story of sculpture through the ages. Illustrated with 230 important works characteristic of the various periods of art.

626. *Record of the Convention of the Western Arts Association at Toledo, Ohio, 1937*. Western Arts Association Bulletin, Vol. XXI, No. 4. Indianapolis, Indiana: Western Arts Association (Harry E. Wood, Secretary, 5215 College Avenue), 1937. Pp. 160.

The keynote of the convention was "Living in the Arts." Discusses programs for developing art in elementary and secondary schools, in colleges, in teachers' colleges, and in W.P.A. projects for adults.

627. TIBBELS, AVERIL. *The Circus Comes to School.* New York: A. S. Barnes & Co., Inc., 1937. Pp. xii+242.

Describes in detail the development of a circus project as a type of entertainment for elementary schools. The book is based on the hypotheses: (1) that the circus has a universal appeal to participants and spectators alike, (2) that it presents a never-ending group of activities, (3) that it is an outgrowth of pupil interests, (4) that it provides opportunities to utilize physical-education activities, and (5) that it automatically becomes a school activity.

628. WHITFORD, WILLIAM G. *An Introduction to Art Education.* New York: D. Appleton-Century Co., Inc., 1937 (revised). Pp. xx+392.

Presents a survey of modern objectives, curriculum-planning, and methods of teaching, with emphasis on integration, creative-educational approach, and the unit conception of organization and administration of subject matter. Extensive bibliography and guide-sheet material covering more than a thousand references to current literature on art education.

629. WINSLOW, LEON LOYAL. "Art Integration in the Elementary School," *American Childhood*, XXII (September, 1936), 5–7.

A review of the integration movement in relation to public-school art education.

630. WINSLOW, LEON LOYAL. "Functional Art Education," *School and Society*, XLIV (November 14, 1936), 645–48.

Discusses the functional importance of art in social and economic life. Suggests that art expression, appreciation, and broad cultural experiences are of vital import in the modern school curriculum.

INDUSTRIAL ARTS[1]

HOMER J. SMITH
University of Minnesota

631. ASHLEY, L. F. "The Scientific Method and Historical Research," *Industrial Arts and Vocational Education*, XXVI (June, 1937), 173–75; "Documentary Methods and Techniques for Data Gathering," ——— (July, 1937), 209–11; "Research Possibilities in the Laboratory Organization," ——— (August, 1937), 235–36; "Opportunities for Historical Studies in Industrial-Arts Education," ——— (September, 1937), 266–67.

These four articles serve industrial teachers and persons who provide initial and advanced preparation for industrial-education positions. Graduate stu-

[1] See also Item 34 (Smith) in the list of selected references appearing in the January, 1937, number of the *School Review*.

dents particularly and administrative officers interested in industrial education are likewise aided. The series provides insight into the need and the possibility of research in this subject area. Gives suggestions concerning types of study, sources of data, techniques, and methods of reporting.

632. BROOME, EDWIN CORNELIUS. "A Basic Plan for Industrial and Vocational Education," *Industrial Education Magazine*, XXXIX (March, 1937), 65–72.

Selected paragraphs from the annual report of the author as superintendent of schools in Philadelphia. Changing educational philosophy, values of industrial schools and classes, curriculums for various levels, definite suggestions for content and procedure for different ability groups are among the subjects treated.

633. CASWELL, WILLIAM EARNEST. "What Units Shall We Offer in Industrial Arts?" *Industrial Education Magazine*, XXXIX (May, 1937), 123–27.

Census data are used to show the range of work types which need to be sampled or explained through industrial-arts instruction. The problem of how to select the most worthy curriculum units is advanced, and helpful suggestions are made.

634. COX, GEORGE B. "What Next in Progressive Education?" *Industrial Arts and Vocational Education*, XXVI (July, 1937), 207–9.

An informative and easy discussion of modern practice and trends, together with anticipation of specific developments in elementary-school, junior high school, senior high school, and junior-college years.

635. DAVIS, ED. "Trends in Methods, Organization, and Selection of Subject Matter for the General Shop," *Industrial Education Magazine*, XXXIX (January, 1937), 25–30.

Report of a questionnaire study in which sixty teachers, supervisors, and teacher-trainers in ten states participated. An extensive bibliography on general-shop administration and procedure is a real contribution.

636. FRANCIS, THOMAS. "The Laboratory Shop of the Small Rural High School," *Phi Delta Kappan*, XIX (April, 1937), 257–60.

A unique statement of how the problems of the small school are met through multiple-use rooms and through community co-operation. Here is a fine example of close-knit, functioning co-ordination. The article is accompanied by a plan of a composite room wherein industrial-arts and general-science courses or units are presented.

637. HINDERMAN, ROY. A "Industrial-Arts Adjustment Possibilities and Vocational Education," *Industrial Arts and Vocational Education*, XXVI (September, 1937), 263–65.

A pointed statement of the demands now made on working youth, with suggestions of new services to be rendered these youth through industrial-arts instruction.

638. MOE, M. P., and BROCKMANN, L. O. *Utilizing Community Resources for Vocational Guidance and Training*. Helena, Montana: M. P. Moe and L. O. Brockmann (Box 217), 1937. Pp. 56.

A bulletin true to its title and particularly suggestive for administrators of small and medium-sized school systems. Plans and results of a successful type of program which combines school and work experiences are indicated in detail.

639. PARR, KENNETH EARL. "Analysis of Essential Factors in the Shop Demonstration," *Industrial Education Magazine*, XXXVIII (November, 1936), 273–74.

In view of the fact that the demonstration is a major element of method in shop-teaching, teachers will be interested in the list of forty-eight suggestions here made.

640. "Report of National Conference on Trade and Industrial Education, Minneapolis, August 17–28, 1936." United States Office of Education, Vocational Division, Miscellaneous 1853, 1936. Pp. 232 (mimeographed).

Full reports of the general sessions and the committee conferences concerning laws and administrative practices in federally aided trade and industrial schools and classes. New fields of training, co-ordination, teacher training, supervision, conference-leading techniques, and apprenticeship are illustrative of the topics discussed.

641. "School Shop Annual" *Industrial Arts and Vocational Education*, XXVI (March, 1937), 69–110 and 1A–70A.

The "School Shop Annual" is a feature and a high light in the growing literature of industrial education. The present number contains four special articles on "The School Shop," five on "What Others Are Doing," six on "Courses and Instruction Sheets," five on "Shop Management," three on "Supervision," and one each on "Shop Layouts," "Safety," and "Guidance." In addition, there are the characteristic equipment lists, advertisements of tools, machines, and supplies, etc.

642. SCHWEICKHARD, DEAN MERRILL. "Implications for Industrial Arts in the New Federal Legislation for Vocational Education," *Industrial Education Magazine*, XXXIX (May, 1937), 136–40.

An excellent article reviewing recent changes in school organization and the consequent reshaping of offerings and practices in industrial education. Chief attention is given to matching community needs, meeting pupil abilities and desires, providing functional subject matter, and securing properly qualified teachers.

HOME ECONOMICS[1]

BEULAH I. COON
United States Office of Education

643. *Course of Study for Elementary Schools*. Denver, Colorado: State Department of Education, 1936. Pp. 724.

The program for home and community life for Grades I–IV outlines content for each grade and the outcomes to be expected.

[1] See also Item 182 (Andrus and Associates) in the list of selected references appearing in the April, 1937, number of the *Elementary School Journal*.

644. FAULKNER, MARY. "Occupational Practice House," *Baltimore Bulletin of Education*, XIV (September, October 1936), 58–59.

An account of the work done in home economics through the "Occupational Practice House" with over-age pupils of fourteen and fifteen who, unable to keep up with the normal children of Grades V and VI, have become difficult to handle or tend to resort to truancy.

645. HARRIS, RHODA. "Homemaking in the Little Red Schoolhouse," *Education*, LVI (April, 1936) 463–65.

Brings out the value of an activity program for young children.

646. *Home Economics Education in Junior and Senior High Schools, 1936.* Olympia, Washington: State Department of Education, 1936. Pp. 106.

Outcomes to be achieved, suggested problems and procedures, pupil experiences, and subject matter for home economics in Grades VII and VIII deal with "Helping with Work at Home," "Helping with Food Preparation and Service," "Caring for Young Children," and "Helping with Clothing Problems." A part of the home-economics course of study for junior and senior high schools, issued in loose-leaf form to allow for additions or changes based on critical use.

647. HOWE, FLORENCE R. *Budgeting—the Arithmetic of Finance.* Teachers' Lesson Unit Series, No. 88. New York: Teachers College, Columbia University, 1936. Pp. 36.

Describes the procedure in developing a unit on the family budget for sixth-grade girls and boys at the Cobbet Elementary School, Lynn, Massachusetts.

648. KINYON, KATE W., and HOPKINS, L. THOMAS. *Junior Home Problems.* Chicago: Benj. H. Sanborn & Co., 1936 (revised). Pp. viii+310.

A revision of a junior high school textbook based on criticisms solicited from pupils, parents, and teachers. The units, adjusted to real life-situations, are aimed to give pupils a consciousness of their responsibilities in both family and community life and to create a desire for healthful habits of living.

649. MCBAIN, MABEL. "Opportunities for Progressive Home Economics in the Elementary Schools," *Practical Home Economics*, XV (May, 1937), 155–56, 182.

The present-day organization of the elementary school indicates that the home economist has both an opportunity and an obligation to supply elementary teachers with helpful materials on home and family life, to participate in the integration of the work of the elementary school, and to encourage teachers' colleges to make home economics a part of the general training of the elementary teacher and to provide general courses in elementary-school work for those specializing in home economics.

650. MINOR, RUBY. *Early Childhood Education.* New York: D. Appleton-Century Co., Inc., 1937. Pp. xx+764.

The chapters on health and physical education, social studies, nature-study, science, and art are integrated with home activities and contain suggestions

for units on good eating and other health habits and the building and furnishing of a playhouse.

651. *Practical Arts: Social Group Representation.* New York State University, Elementary Education Division. Albany, New York: University of the State of New York Press, 1936. Pp. 14.

Several activities to be planned and carried out by the children center in home life in various parts of the world and illustrate differences in food, clothing, and shelter.

652. STIGLER, W. A. *Handbook for Curriculum Development.* Bulletin of the State Department of Education, No. 354, Vol. XII, No. 2. Austin, Texas: State Department of Education, 1936. Pp. 200.

The statement submitted by the Homemaking Committee of the Practical Arts Division, which is included in this volume, deals with the interests, activities, and needs of children of elementary-school age as they relate to home and family life and gives suggestions for using these in making a fused program for the various grades.

653. TABOR, MARJORIE. "Home and Farm Life—A Unit of Work in First Grade," *Educational Method,* XVI (November, 1936), 75–77.

Describes the activities of beginning pupils, many of which centered in the making of a dollhouse and its furnishings and the dressing of dolls, and enumerates the educational outcomes of these and other activities.

654. TIPPETT, JAMES S., IN COLLABORATION WITH THE COMMITTEE OF THE PARKER SCHOOL DISTRICT, GREENVILLE, SOUTH CAROLINA. *Schools for a Growing Democracy.* Boston: Ginn & Co., 1936. Pp. viii+338.

In the Parker School District effort is directed toward making the classrooms "replicas of life" which provide opportunities for individual self-finding and experiences in social living. Among other activities, a study in textiles for Grade V is outlined.

655. VAN LIEW, MARION S. "A Philosophy of School Lunch Management," *Practical Home Economics,* XV (April, 1937), 128–30.

The school lunch is conceived as one of the essential provisions for teaching pupils good habits of nutrition and of eating. It is therefore as much of an administrative responsibility as that of furnishing the classrooms and supplying other learning facilities. The home-economics teacher needs to play an important part in assisting with these pupil learnings.

656. WOODWARD, MARION B. "An Outline for Teaching Housing," *Practical Home Economics,* XIV (September and October, 1936), 263, 290; 316–17.

An outline set up by a home economist dealing with some of the basic problems in housing and including suggested pupil experiences and helpful reference materials. Emphasis is given to the sociological and health phases of the subject, to national and local housing programs, and to factors important in programs for improvement of individual family housing.

LIBRARY TRAINING

EVANGELINE COLBURN

657. "Annual Meeting, 1936, American Library Association, School Libraries Section," *American Library Association Bulletin*, XXX (August, 1936), 766–82.

The papers presented pertain chiefly to high-school libraries but contain a great deal which should prove valuable to anyone interested in library training. "Integration and Library Instruction" is discussed, and views on the value of library exhibits are given.

658. JULIAN, KATHERINE L. "Check Exercises Based on a Book Unit," *Instructor*, XLVI (November, 1936), 48, 73.

Outlines self-checking lessons based on a book unit for intermediate and upper grades.

659. JULIAN, KATHERINE L. "Learning about Books," *Instructor*, XLVI (November, 1936), 34, 36, 38, 42.

Suggested procedures for helping children acquire the library habit. General objectives and sample lessons are given for primary, intermediate, and upper grades.

660. TREDICK, FLORENCE H. "At Work with Books," *Elementary English Review*, XIII (November, 1936), 255–56.

A brief description of training given children in the use of books in library and classrooms.

HEALTH AND PHYSICAL EDUCATION

D. K. BRACE
University of Texas

661. BENT, M. J., and GREEN, ELLEN F. "An Experiment in Health Education," *Journal of Health and Physical Education*, VII (October, 1936), 486–88, 527–28.

Report of an experiment in health education in negro colleges and elementary schools of Nashville, Tennessee. Marked improvement in health habits resulted from the improvement of dietary and sanitary conditions.

662. CALVER, HOMER N. "Shall Health Education Be Carried on by Health Workers or by Paid Advertising?" *Trained Nurse and Hospital Review*, XCVII (July, 1936), 60–62.

A stimulating article dealing with the importance of the right sort of health instruction.

663. COTTERAL, BONNIE and DONNIE. *The Teaching of Stunts and Tumbling*. New York: A. S. Barnes & Co., Inc., 1936. Pp. xvi+338.

A revision of a previous book, with special emphasis on teaching method and class organization.

664. GROUT, RUTH E. (Editor). *Handbook of Health Education.* Garden City, New York: Doubleday, Doran & Co., Inc., 1936. Pp. xxii+298.

An outline of a program of health education for small rural schools.

665. JEFFREY, BILL. *The Boys with the Educated Feet.* Minneapolis, Minnesota: Burgess Publishing Co., 1936 (revised). Pp. 86.

An excellent book for the teacher who wishes to learn more about the teaching of soccer football.

666. LIPOVETZ, FERDINAND JOHN. *A Recreation and Sports Handbook for Playground, School, Community and Camp.* Minneapolis, Minnesota: Burgess Publishing Co., 1936. Pp. 418.

A comprehensive book on sports and recreational methods, which will serve as an excellent teaching aid.

667. ROOD, ELMA. "A Program of Training Teachers in Service," *Journal of Health and Physical Education,* VII (September, 1936), 427–29, 456–57.

A report of the use in a rural community of the health problems of children in connection with the training of teachers.

Educational Writings

REVIEWS AND BOOK NOTES

Academic freedom in the lower schools.—The college has long been thought of as the level at which arise the issues of academic freedom; the college professor as the person chiefly involved. Invited by the American Historical Association to undertake a study of this problem in teachers' colleges and schools below college grade, Professor Beale doubted that enough material existed to make a volume. The outcome was, however, a mountain of material compressed with difficulty into two volumes, plus the revelation that freedom of teaching at all levels is a fundamental social problem.

In the second of these two volumes,[1] two chapters define the problem and give historical background. Eight chapters analyze specific topics concerning which problems of free teaching are peculiarly acute, for instance, war, internationalism, patriotism, and economic problems. Seven more chapters cover censorship of textbooks, regulation of teacher conduct, violations of tenure, and similar items. Three chapters present the persons or the groups from whom come pressure and interference. These three combine admirably with the preceding chapters by relating the interested persons and pressure groups to the specific points of interference in the curriculum and the conduct of the schools. The three final chapters are forceful and inspiring analyses of the relation of freedom to education, of means of increasing freedom, of the necessity for sane definition of freedom, and, significantly, of the relation of teacher training to freedom.

No body of case materials exists. Professor Beale was forced to make an unbelievably extensive search of newspaper and periodical files and of collections of clippings, to engage in voluminous correspondence and in far-flung interviewing. These methods of research will draw fire immediately, especially from persons who, disliking the data and the conclusions, have no data in refutation. Ultra-conservatives, professional patriots, and verbalists generally are likely to raise a large hullabaloo about the "subjectivity" of the study. The careful reader will see through this smoke screen and inquire how the subjective methods were utilized.

[1] Howard K. Beale, *Are American Teachers Free? An Analysis of Restraints upon the Freedom of Teaching in American Schools*. Report of the Commission on the Social Studies of the American Historical Association, Part XII. New York: Charles Scribner's Sons, 1936. Pp. xxiv+856. $3.50.

Professor Beale has expounded at length the pitfalls and the defects of these research techniques. He has gone far beyond the demands of ordinary impartiality in leaning backward while interpreting his data. His documentation is almost overwhelming in its meticulous detail. Both sides of the case have been presented with the same incisive, merciless citation of names, places, dates, page references, authenticated quotations, and remarks. Side by side with dark pictures of arrogant interference with freedom, of stupid repression, of cowardice and dishonesty in school officials, there stands a bright picture of courageous resistance to interference, of willing sacrifice for standards, and of intelligent defense of teachers by enlightened boards of education. The bright picture is far smaller than the dark one, but it is faithfully reported. As final earnest of the investigator's scholarly impartiality, there is scathing indictment of part of the teaching body for naïve ignorance of the social problems involved; for complacent stupidity in the face of attack on a fundamental of education; and for selfish confusion between academic freedom and exhibitionism involving personal idiosyncrasy and naïve gaucherie, between freedom and cases involving plain bad manners and lack of tact. Sharp criticism of traditional aims and techniques of teacher training, together with an enlightening discussion of freedom in relation to level of training, is found.

The author concludes that freedom of teaching is not and cannot be an issue. The real problem is: "Dare society face the consequences of *not* permitting the teachers of the next generation complete freedom" (p. 778).

The volume will undoubtedly become a standard source book. Educational associations could well afford to finance wide distribution throughout the country.

WILLIAM H. BURTON

UNIVERSITY OF SOUTHERN CALIFORNIA

How to teach.—The teacher's business is to formulate, or to direct the formulation of, goals; to see that pupils are interested; to provide materials for them to work with; to keep them at the job with a song in their hearts; to direct their study; to check progress; to help pupils measure themselves; and to provide opportunities for them to use their learnings realistically. At least, that is the way a city superintendent sees it and presents it in a short, well-written book on general method.[1]

Goals, aims, or objectives, in their specific forms at least, must be the same for teacher and for pupils. The teacher, of course, usually sees them first; then she entices the pupils into happy acceptance. Pretesting and diagnosis help define the goals. Apparently goals are usually things to be learned, and pupils not infrequently have to be made to take interest in learning them. The teacher evokes interest by touching off some common human motive, such as curiosity,

[1] L. John Nuttall, *Teaching Purposes and Their Achievement*. New York: Charles Scribner's Sons, 1936. Pp. x+290. $1.80.

acquisitiveness, emulation, combativeness, desire for social approval, dislike for disapproval, the urge to manipulate and construct, and the urge for activity and play. Once interested or motivated, pupils must have subject matter to sustain them in their eager race toward their goals. For the best results the subject matter should be organized into problems, or into large units, or hooked up with natural activities. Real work begins when directions (the assignment) are issued. The author gives eighteen advices on the assignment. Instruction must be individualized by the use of contract plans, socialized group work, ability grouping, Winnetka techniques, or otherwise. The direction of study is the core of the teacher's task. Ways of directing study will differ as aims differ, that is, according to whether the learnings sought are skills to do, definitions and rules, information and understanding, assurance of reality, or appreciation. Lectures, silent reading, discussion, perceptual experiencing, and appeal to emotions—all have their places and their appropriate techniques. All along there must be testing to see how things are coming and to help pupils appreciate themselves. Finally, pupils who have learned must be given a chance to express their learnings in situations as lifelike as possible.

Thus the end of the teaching process as set forth in this book is really what ultra-progressives think of as the beginning, the end, and pretty much the whole of the educative process. The author, however, is not an ultra-progressive. He is, one judges, a practical school man who desires to go in the general direction pointed out by modern educational scouts but who would himself prefer to march somewhere in the front ranks of the troops rather than deploy with the scouts themselves. The illustrations of teaching practices which he gives approvingly are drawn from teachers' reports and from his own supervisory observation. They are not particularly striking, but they may be helpful. To me the account of the teaching of "Little Boy Blue" to a second-grade class is disturbing. This poem is an adult poem, and the effort to wring the hearts of seven-year-old children with it seems atrocious.

The book is addressed to teachers and prospective teachers. For prospective teachers it is too short, too general, and too reticent about where to go for further elaboration of its concepts. I would recommend it to Mr. Nuttall's fellow-superintendents, to teachers in service, and to professors of education who wonder whether they are "getting their stuff across."

M. H. Willing

University of Wisconsin

Mental hygiene in the classroom.—Teachers who have not been able to view the problems of mental hygiene with equanimity because of the prevalent tendency to become disturbed by the contemplation of the grosser forms of mental abnormality will be pleased with a book which attempts to apply the principles of mental hygiene to classroom teaching by emphasizing the positive aspects of pupil adjustment.[1]

[1] Harry N. Rivlin, *Educating for Adjustment: The Classroom Applications of Mental Hygiene.* New York: D. Appleton-Century Co., Inc., 1936. Pp. xiv+420. $2.25.

The author begins by summarizing the psychological principles which the teacher must understand in order to make the classroom contribute to the mental health of the pupils. The nature of emotional stability is presented as the prime essential for adjustment, followed by a description of the interpretations of problem behavior by Freud, Jung, Adler, the behaviorists, the gestaltists, and the psychobiology of Adolf Meyer.

This theoretical presentation is followed by a discussion of the personality and environmental factors which serve as a background of problem behavior. These factors include mental ability, physical health, sex education, economic conditions, recreational facilities, neighborhood contacts, and religion.

The last third of the book is devoted to practical applications of mental-hygiene principles. The author gives specific directions for the modification of classroom discipline, explains how traditional means for motivating children must be altered, and points out the harm that may come from unwise punishment of children. His final plea is for the adjustment of the teacher in order that proper pupil-teacher relations may obtain.

For the last decade the emphasis in mental hygiene has been changing from the need for the establishment of more and more clinics to the need for prevention of mental maladjustments through education. Clinicians have discovered that, although they may diagnose problem behavior in children, treatment must be delegated to the teacher. Mental health cannot be imparted to children through clinical interviews. Instead, an atmosphere must be created in the school that will enable children to get a proper outlook on life.

Teachers have been told that they must change their emphasis from the presentation of subject matter to the development of the complete personality of the child, but too often such admonitions have little significance for the teacher. They frequently sound like vague criticisms which too easily lead to resentment. There is nothing in this book that the teacher can possibly interpret as criticism. Instead, the viewpoint of the educator pervades every chapter, and concrete and workable methods are proposed for putting into effect the principles which, too often, are presented in a form that nobody but a physician or a scientist can understand.

The author also makes perfectly clear the principle that the problem child is the one who may be progressing toward mental ill health rather than the child who upsets the classroom decorum or who disturbs the emotional prejudices of a particular teacher. The reader is stimulated to study children, rather than to study problem behavior in the abstract, and to measure teaching success in terms of the wholesome attitudes imparted to a child in such a manner that these attitudes become an integral part of his life and thinking.

JOHN J. B. MORGAN

NORTHWESTERN UNIVERSITY

Clinical psychology coming of age.—One of the contemporary interests and problems of American psychology is the development and integration of state and national professional organizations for clinical psychology. While the clini-

cal psychologist has a well-defined role in many institutions, he has for the most part been compelled to create that role by a personal synthesis of interest, training, and experience. Few universities feel that they have a satisfactory program for the preparation of the clinical psychologist. Psychologists have frequently developed manuals of practice containing the special types of information most useful for them in their work. Books written for their special needs have been few and lacking in detail and comprehensiveness. Louttit meets these needs in an unusually adequate fashion.[1]

Louttit's book illustrates the breadth and the depth of the sources from which a modern clinical psychologist may draw. A synoptic treatment of knowledge concerning the conditions encountered in clinical practice is accompanied by useful reference tables. The author has limited himself to the preparation of a handbook of children's behavior problems. The data for the book have been selected from the various fields that have contributed helpful material on the diagnosis and the treatment of behavior disorders in children.

The first section of the book presents an account of diagnostic methods, based on history, examinations, and psychometrics. A useful feature is a series of tables giving information on available instruments for the measurement of educational achievement, special abilities or aptitudes, performance, mental growth, and personality. A second section is devoted to the problems of mental deficiency, school retardation, specific disabilities in school subjects, and superiority. This section contains tabular summaries of major findings on the relation between achievement and mental capacity.

The third and largest section of the book is devoted to behavior problems. The major interest is in those behavior problems not attributable primarily to inferiority or superiority in general abilities or to a demonstrable organic disability. The author is chiefly concerned with primary behavior problems where the sources and the reasons are to be sought in the individual's reactional biography. In this group psychological factors of diagnosis and remedy are of first importance. The difficulty of making the distinction is realized. Separate chapters are devoted to conduct problems, juvenile delinquency, speech defects, personality problems, and the psychoneuroses and psychoses.

A final section of the book is concerned with behavior problems correlated with organic disabilities. Diagnosis of visual and auditory defects is described, and the relation of the defects to personality, intellectual performance, and educational achievement is discussed. Particular behavior conditions resulting from encephalitis, epilepsy, malnutrition, and physical disabilities of a handicapping or crippling type are reviewed.

Forty-four pages devoted to references make it possible for the clinician to secure preliminary orientation on practically any problem that is likely to be encountered in clinical practice. Case histories add to the general interest and value of the work.

[1] C. M. Louttit, *Clinical Psychology: A Handbook of Children's Behavior Problems*. New York: Harper & Bros., 1936. Pp. xx+696. $3.50.

The book will please those workers who believe that practice in the field of human relations should rest on experimental, observational, historical, and quantitative methods. The child analyst, in the sense of psychoanalysis, will be chagrined at the easy dismissal of subjective dynamic hypotheses. Even those with an objective bent would probably welcome the addition of a more systematic and extended consideration of the therapeutic values of the interview, of the diagnostic possibilities in observation of the play of children, and of the clinical use of toys and construction materials.

The book should find favor for use in organized courses in clinical psychology offered at the larger universities. It is an indispensable reference volume for clinical workers. All professional practitioners in the area of human relations—whether teacher, preacher, social worker, doctor, lawyer, or administrator—will profit by an examination and study of its contents.

WILLARD C. OLSON

UNIVERSITY OF MICHIGAN

A psychiatric explanation of human behavior.—During the past twenty or twenty-five years the psychiatric field has fairly definitely divided itself into two general phases: (1) the study and treatment of mental diseases and (2) the study of maladjustments of behavior which are included under mental hygiene. Most persons are not aware of the tremendous amount of research in the field of mental diseases and consider the sole function of the psychiatrist to be work with behavior disorders of various types. It is not to be denied that the mental-hygiene aspect of psychiatry has contributed material of inestimable value to parents, teachers, social workers, and others involved in human relationships. Nevertheless, because of the relative youth of this field, more educational than research work has been done, and this fact has resulted in extravagant claims and statements regarding the origins and the mechanisms of human behavior. The situation is complicated by the existence of a variety of schools of psychiatry, which have in general produced no research findings but have, nevertheless, been loud in their claims to a complete understanding of the origins of human acts. Still another complication has arisen in the form of a variety of semitrained individuals whose only legitimate claim to an understanding of human behavior is their interest. Thus there are insurance salesmen who are writing books on normal and abnormal behavior, teachers who syndicate columns on the treatment of behavior disorders, and popular lecturers who appear before women's clubs in the guise of specialists. It seems, therefore, that the danger to psychiatry as a science lies in the popularization of some of the contents, that is, the popularization of the material which is of everyday interest to almost every person but which has been inadequately studied experimentally.

Obviously no treatise on psychiatry can adequately include the wide variety of topics ordinarily included in this field. At best, any one person can be adequately informed on only a few psychiatric topics. Sadler's volume[1] of more

[1] William S. Sadler, *Theory and Practice of Psychiatry*. St. Louis, Missouri: C. V. Mosby Co., 1936. Pp. xxii+1232. $10.00.

than twelve hundred pages is a magnificent attempt to include in one book almost every conceivable topic of human behavior and is one of the few attempts made to write a system of psychiatry. Its chief defect, however, is this very attempt to systematize the whole field of psychiatry in spite of the many areas in which little or no experimental work has been done. The book, which contains seventy-seven chapters, treats topics ranging in type from genetic psychology to self-control, and from the problems of the preschool child to adult paranoid states. Obviously no one person can adequately treat such a range of topics, and the author must have employed a variety of assistants in this work.

In regard to the problem of the popularization of psychiatry, some of the author's statements in the Preface show his attitude. He states, for example, "I feel at perfect liberty to resort to the clinical application of philosophy and even of religion" (p. viii). To many trained psychiatrists this statement may be a warning not to refer to the rest of the book. This is not to deny the importance of philosophy and religion; but, if the author seeks a compromise between religion and science or, as he clearly implies elsewhere, between the various schools of psychiatry, then the book must be considered a treatise on the philosophy of psychiatry rather than as a scientific discussion of the content of psychiatry.

The evident difficulty involved by the treatment of hundreds of topics within one volume is well illustrated by the superficiality with which some subjects are discussed and by the construction of hypotheses lacking the most fundamental verification. As examples, on page 239 the influences and the contributions of biochemistry are treated in one paragraph containing six sentences; on page 246 the topic of social attitudes is treated in less than a page. Here the author classifies human dispositions into nine categories. No definition or substantiating evidence is given for the term "disposition," nor is there any other evidence that the classification was developed by anything more than personal opinion. Examples of this classification of human disposition are the *sensual* and the *tender-hearted*. At once the author takes us back to the kind of discussion of human behavior characteristic of the nineteenth or perhaps the eighteenth century. The author is evidently fond of classifications. On page 261 he classifies isolated personalities into eleven categories, among which are the *volitional old maids*, the *placid and gentle philosophers*, the *peace-loving pacifists*, and the *ultra-scholastic* types. Certainly the pacifists would reject the idea that they are isolationists.

It is perhaps unfair to utilize so much of the space of a review in pointing out the defects of a book. Nevertheless, one more serious fault, which is rather dangerous, should be pointed out. It is the attempt of the author to give rules of mental hygiene. On page 919 he states that neurotic and highly emotional persons should cultivate the ability to think in exact opposites and to see the other fellow's viewpoint. It should be obvious to any well-trained person that mental hygiene does not consist in wise sayings or sermons. The author has precedent, however, in this attempt to lay down rules, for he quotes Austin F. Riggs on ten rules of a mental-hygiene code.

Despite the book's obvious defects, much can truly be said of the book as a volume containing a great deal of informative material and sound advice. It certainly contains much more material than is ordinarily given the medical student in his course work in psychiatry. The book should also be a genuine help to students of other fields who wish to obtain a rapid review of the large number of topics in this field. Perhaps the popular terms that the author uses may be partially justified by the current fashionable use of generalities and coined terminology by a large number of superficially trained psychiatrists whose most important armament is linguistic flexibility. Perhaps the "clinical philosophy" which this author wishes to use in his treatment of patients is also justified by the large number of persons in fields other than psychiatry or psychology who insist on using psychiatric and psychological terminology without adequate training or understanding.

MANDEL SHERMAN

A handbook of methods for the teacher of language in the early grades.—With the influx of elementary textbooks in language during the last three or four years, there have appeared manuals and handbooks to assist teachers in the use of such material. Since professional books dealing with the teaching of language in general have been relatively scarce, a book[1] on the language program in Grades I and II will help to meet this need.

The book is divided into four parts. Part I, entitled "The Point of View," gives, in seven pages, the author's ideas concerning the teaching of language to young children. Such questions as major ends to be attained, the problem of method, the techniques of expression, and the teacher's background of understanding are discussed. It is inevitable that the attempt to put so much into so short a space should lead to a treatment which is somewhat brief and abstract. A full discussion showing the relation of language and the activity program today would have been helpful to teachers.

Part II, "Language Activities," is much better. It gives, in sixty-three pages, full descriptions of various language activities which are desirable for children of Grades I and II. The important phases discussed are: conversation, making and keeping records, making visual aids, delivering messages, explanations and directions, making inquiries and announcements, making book reports and reproducing stories, listing and outlining, making oral reports and speeches, letter-writing, dramatization, creative expression through story and verse, and observing courtesies.

In discussing each of these topics, the author first makes clear the need for the particular activity and gives practical situations of happy and useful living upon which the language activities are based. If the child is to grow normally in the language activity, the teacher must utilize such situations. With the appreciation and the need explained fully, the author suggests teaching procedures

[1] Bessie Bacon Goodrich, *The Language Program in Grades One and Two.* New York: Charles E. Merrill Co., 1936. Pp. iv+140.

which may be used to promote growth in each of the language activities named. Finally, she lists desirable outcomes for each activity.

The situations described are real and worth while, and the teaching procedures are good. However, there is a question concerning the outcomes. The author states, in connection with certain activities, that "the outcomes . . . . should be considered as possibilities" and, further, that "not all of them can be achieved in the first and second grades" (p. 13). Teachers may well ask, "Are there no outcomes which can be achieved definitely in these grades?" Of the nineteen objectives listed under "Conversation," surely three or four could be stated as definite goals to be attained in Grades I and II.

Part III, "Forms and Technicalities," devotes ten pages to ways in which sentence forms, punctuation, correct usage, and standard forms in letter-writing are to be taught.

Part IV devotes sixty pages to descriptions of specimen units involving language activities. Here the classroom teacher will find help in planning activities for a language program. Such units as wool, the post office, milk trains, and passenger trains are treated in detail.

The chief value of this book is in its treatment of specific activities upon which language-teaching is based in Grades I and II. The presentation of type lessons and children's compositions will prove suggestive to teachers.

GRACE E. STORM

CURRENT PUBLICATIONS RECEIVED

GENERAL EDUCATIONAL METHOD, HISTORY, THEORY AND PRACTICE

BROWN, HARRY ALVIN. *Certain Basic Teacher-Education Policies and Their Development and Significance in a Selected State: A Historical and Interpretative Study of Certain Aspects of Teacher Education in New Hampshire Which Represent Significant Developments in the Professional Preparation of Teachers in the United States.* Teachers College Contributions to Education, No. 714. New York: Teachers College, Columbia University, 1937. Pp. vi+184. $1.85.

Casebook of Research in Educational Psychology. Edited by Sidney L. Pressey and J. Elliott Janney. New York: Harper & Bros., 1937. Pp. xviii+432. $2.00.

GILLSON, MARGERY STEWART. *Developing a High School Chemistry Course Adapted to the Differentiated Needs of Boys and Girls.* Teachers College Contributions to Education, No. 709. New York: Teachers College, Columbia University, 1937. Pp. viii+96. $1.60.

HOLLEY, CHARLES ELMER. *High School Teachers' Methods.* Champaign, Illinois: Garrard Press, 1937. Pp. viii+514. $3.00.

HOPKINS, L. THOMAS, with the co-operation of FRED M. ALEXANDER, SIBYL

BROWNE, J. WILLIAM BUCHANAN, IRWIN A. HAMMER, PICKENS E. HARRIS, E. C. LINDEMAN, I. H. MACKINNON, GOODWIN WATSON, and RAYMOND H. WHEELER. *Integration: Its Meaning and Application.* New York: D. Appleton-Century Co., Inc., 1937. Pp. xiv+316. $2.00.

KUDER, MERLE. *Trends of Professional Opportunities in the Liberal Arts College.* Teachers College Contributions to Education, No. 717. New York: Teachers College, Columbia University, 1937. Pp. x+134+102. $2.35.

LA SALLE, DOROTHY. *Physical Education for the Classroom Teacher.* New York: A. S. Barnes & Co., Inc., 1937. Pp. xii+210. $2.00.

MURPHY, LOIS BARCLAY. *Social Behavior and Child Personality: An Exploratory Study of Some Roots of Sympathy.* New York: Columbia University Press, 1937. Pp. viii+344. $3.50.

OBERHOLTZER, EDISON ELLSWORTH. *An Integrated Curriculum in Practice: A Study of the Development, Installation, and Appraisal of a Certain Type of Integrated Curriculum in the Educational Program of the Public Elementary Schools of Houston, Texas.* Teachers College Contributions to Education, No. 694. New York: Teachers College, Columbia University, 1937. Pp. xvi+218. $2.35.

OBERHOLTZER, KENNETH E. *American Agricultural Problems in the Social Studies: Some Important Agricultural Problems and Related Generalizations That Should Be Considered in the General Curriculum of Urban and Rural Schools.* Teachers College Contributions to Education, No. 718. New York: Teachers College, Columbia University, 1937. Pp. vi+120. $1.60.

SEYFERT, WARREN C. *School Size and School Efficiency: A Study of the Effects of Enrollment upon the Organization of Reorganized Secondary Schools.* Harvard Bulletins in Education, No. 19. Cambridge, Massachusetts: Harvard University Press, 1937. Pp. xiv+316. $1.60.

SHARMAN, JACKSON R. *Modern Principles of Physical Education.* New York: A. S. Barnes & Co., Inc., 1937. Pp. viii+208. $2.00.

SPEARS, HAROLD. *Experiences in Building a Curriculum.* A Treatment of the High-School Curriculum Program of Evansville, Indiana, with Special Attention to Classroom Methods. New York: Macmillan Co., 1937. Pp. xii+196. $2.00.

STANFORD UNIVERSITY EDUCATION FACULTY. *The Challenge of Education: An Introduction to Education.* New York: McGraw-Hill Book Co., Inc., 1937. Pp. xiv+472. $3.00.

TUCKER, LOUISE EMERY. *A Study of Problem Pupils.* Teachers College Contributions to Education, No. 720. New York: Teachers College, Columbia University, 1937. Pp. viii+172. $1.85.

WHITNEY, FREDERICK LAMSON. *The Elements of Research.* New York: Prentice-Hall, Inc., 1937. Pp. xviii+616. $3.50.

WILLIAMS, JESSE FEIRING; DAMBACH, JOHN L.; and SCHWENDENER, NORMA. *Methods in Physical Education.* Philadelphia: W. B. Saunders Co., 1937 (second edition). Pp. 278. $2.50.

BOOKS PRIMARILY FOR ELEMENTARY-SCHOOL TEACHERS AND PUPILS

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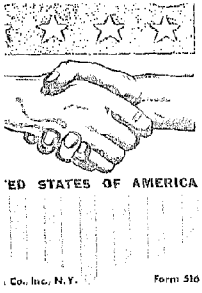

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THE ELEMENTARY SCHOOL JOURNAL

VOLUME XXXVIII DECEMBER 1937 NUMBER 4

Educational News and Editorial Comment

THE POLITICAL DOMINANCE OF THE CHICAGO SCHOOLS

The citizens of Chicago have long been accustomed to the disastrous consequences of politically controlled boards of education, but never before in the history of the city has a board of education manifested such complete indifference to the welfare of the children of the city. The present board has reduced the superintendency to impotence so far as any real leadership is concerned. Anyone at all familiar with the facts is perfectly aware that many appointments in the schools of the city are made on the basis of favoritism and to satisfy political interests. The morale of the teaching staff, both principals and teachers, has been seriously impaired. The administration has resorted to reprisal as a means of stifling criticism among teachers; it is using fear as an instrument of coercion. The fear of espionage and reprisal is permeating the entire school system.

On November 10, the *Chicago American* carried a statement to the effect that Superintendent William H. Johnson and the Board of Education propose a complete reorganization of the program of secondary education. According to this announcement, approximately 80 per cent of the work in the Chicago high schools will be

vocational in character. The plan calls for a rapid change in the teaching personnel of the high schools and for the construction of factory-type buildings adjacent to every high school to allow for practical shop training in trade and industry. As an educational measure, the plan is wholly indefensible; if it is intended to create jobs and contracts for political spoilsmen, it is little short of a stroke of genius.

At this writing it is too early to judge the reaction of the Chicago press to the board's latest policy. It is gratifying, however, to note that the *Chicago Daily News* has expressed itself editorially as being in vigorous opposition:

Presumably with approval of the Board of Education, which is a small body of political appointees exercising autocratic authority, Superintendent W. H. Johnson proposes a revolution in the educational program of the Chicago public schools. But the citizens and taxpayers who support the schools have not been consulted. They should be heard before this arbitrary body, through its chosen deputy-autocrat, foists upon a stunned community a scheme of education that abandons the fundamental principles and ideals of American democracy, and emits the aroma of incipient Fascism and the taint of spoils politics.

A program that contemplates the wholesale conversion of Chicago's high schools into trade schools; that virtually obliterates college as a hope and ambition on the horizon of Chicago's youth; that, for the majority of students, relegates all cultural studies, including languages, mathematics, and the sciences, to the first two years of high school; that aims at the turning-out of technical robots rather than thinking citizens, is not an American educational program, as Americans have understood the significance and worth of education; it is not a preparation for effective life in a democracy as Americans have understood the meaning and opportunities of a free democracy. It is an educational program for a totalitarian state, in which the dictator and his hand-picked associates do all the thinking for the people.

Citizens of Chicago should demand of the Board of Education that so radical a change in the educational emphasis and objectives of their public-school system should be submitted to them for approval or rejection before any further steps are taken to put it into effect.

If readers of the *Daily News* review the disclosures that have been made in its columns for more than a year, they will find the finger posts all along the road pointing toward the culmination of policy which now stands out in bold and startling relief. However shocked they may be by the composite picture which appears when the details are fitted together, they cannot be wholly surprised. By the facts related in the news columns, no less than by editorial comment, they have been warned of the trend and its dangers.

Meantime, the politician trustee and the ward committeeman rejoice because the proposal would create new excuses for the temporary—that is the political—appointment of teachers. Dr. Johnson has taken advantage of this opportunity to bait his plan for political support. Moreover, to the glee of the politicians, the plan opens an alluring vista of new contracts. School buildings must be remodeled, new schools must be erected, quantities of special equipment must be bought. The board has already appointed a supervisor of vocational and technical education, at a salary of $4,800, whose duty it will be to select and purchase vocational-school equipment and machinery.

The treacherous hypocrisy of the claim that the conversion of the high schools into trade schools is a magnanimous concession to the needs of the children of the common people is too obvious to call for further exposition. Never before has any American educator seriously proposed the use of the public schools to create a semi-educated class, trained not to think but to follow the lines of a blueprint or take orders from a foreman. That is the sort of "democracy" preferred by the dictators of European countries. It is utterly alien to the spirit and traditions of America. It cannot be put over on Chicago if the people say "No!"

The Role of the City in Our National Economy

Some time ago the National Resources Committee appointed an Urbanism Committee to study the problems of urban life on a national scale. This committee has recently published a report under the title *Our Cities: Their Role in the National Economy*. This report constitutes the first major national study of cities in the United States yet to appear. It takes stock of the varied conditions and problems of urban America—of the urban way of life, of poverty and inequality, of insecurity and unemployment, of health and education, of population trends, of federal and city relations. The teachers of America cannot fail to have a professional interest in this report.

In the Foreword to the report the National Resources Committee discusses as follows some of the emerging problems of urban communities:

It is important to look at some of the emerging problems of urban communities and to consider such forms of guidance and support as may seem feasible and appropriate under all the circumstances.

1. The most drastic inequalities of income and wealth are found within the urban community. Relatively to their rich fellow-citizens, the poor are poorer in the city than they are elsewhere despite an increasing standard of living for the city worker. Widespread poverty and cyclical unemployment and insecurity

threaten purchasing power, and without continuous mass purchasing power our urban industry and mass-production economy cannot continue to function properly.

2. One of our specific economic problems is the lack of articulation among the various industries within our urban communities. Frequently the decision to locate an industry in one city or another is based upon the immediate opportunities of a particular enterprise or the desire of a community to increase the total amount of industrial activity, regardless of its effect upon the local industrial structure. Localities, by means of subsidies, tax exemption, and free sites, have indiscriminately attracted enterprises which did not mesh with the rest of the community's industries and which sooner or later helped to throw the entire industrial pattern out of gear. Under such unbalanced conditions, it is impossible to achieve a maximum employment for the available labor supply and a minimum of seasonal and cyclical fluctuations in the total pay roll of the community. Instead, the results may be migrant labor, increased unemployment load, lower wages, shrunken purchasing power, loss of business, high cost of relief, untenanted property, tax arrears, and curtailed municipal services.

3. Rapid obsolescence of physical plan and plant is another problem which the American city has had to face. Villages, in all too short a period of time, have become towns, towns have become cities, and cities have turned into metropolitan centers, where brick houses replaced frame, apartment hotels succeeded residences, office buildings replaced shops and lofts, inns became grand hotels, and the early skyscrapers were converted into colossal cloud-scratchers. Some cities on the other hand have become deserted mill sites and dreary ghost towns. America was growing, but it was also wasting away, and traces of this deterioration are with us today in the form of many blighted neighborhoods.

4. Competing forms of transporation have left their disrupting imprint upon the national urban pattern. Located originally on natural waterways, American cities found their sister-towns rising up during the canal era on new water routes. With the coming of the railroads these canal cities met in their turn a similarly disastrous fate. Then came competing railroads, and cities again began to rival one another with excessive subsidies and cut-throat competition for rate reduction. Nor have we yet reached the end of this process. The motor truck and the passenger bus have long since entered the field of competition, and now the airplane begins to affect the national distribution of our urban centers and even the local pattern and the plan of our cities.

5. The unparalleled growth of cities has been accompanied by uncontrolled subdivision and speculative practices and by the most fantastic real-estate booms which have meant dramatic profits to a few, but tragic personal losses to others and burdensome delinquent properties to the community; and this on a scale affecting the economic situation of the entire nation. The history of the recent industrial depression cannot be written without an account of the role of unsound financing and of speculation in real estate which at times became mere gambling. We are now faced with the problem of arriving at a rational urban

land policy which, while affording private owners and developers adequate opportunity for wise and profitable land uses, will curb the forms of speculation that prove calamitous to the investing and the taxpaying public.

6. Urban housing is one of the most burdensome problems the country now has to face and it calls for the nation's most serious consideration. A real property inventory of sixty-four cities made in 1934 by the Department of Commerce and the Civil Works Administration showed that more than one-sixth of 1,500,000 residential dwellings were substandard, about four-fifths of the dwelling units are made of wood, about one-third are over thirty years old, a large proportion are in a state of serious disrepair. Even at their most reasonable figures rentals are so high that they exclude vast blocs of urban families from housing facilities of minimum standard.

7. Urban public health is endangered particularly in blighted areas and among low income groups. Morbidity and mortality rates in infants' diseases and tuberculosis are higher here than elsewhere, in spite of an admirable development of urban public health services. Dirt, smoke, waste, soot, grime, and the reckless pollution of water are still among the noxious enemies of city life despite valiant official attempts to regulate these evils.

8. The city with its diversity of ethnic, religious, and cultural strains is the haven par excellence of many widely varying types of personalities whose names loom large in the history of America, but in this heterogeneity the city also finds some of its weightiest problems. The various parts and participants of the urban economy are very highly specialized and the urban way of life is often socially disconnected though economically interdependent. Allegiances may become group, class, or sectional rather than community or city-wide. How to prevent these strains of separation from disrupting the whole city or its civic groups or even its families, how to weave these vivid and variegated cultures into a positive civic program of intercommunication and co-operation is one of the challenging problems of the coming decades.

9. While free primary and secondary education is now widely available in urban areas, city youths in all too many cases are still barred from higher educational opportunities they might well utilize because they must all too frequently supplement the family income by going to work. Vocational education and adaptation still limp and lag behind their possibilities although much work has already been started. Adult education after so many years of enthusiasm for this form of civic enlightenment in cities is an inadequately supported service and is still an experiment instead of an accepted responsibility of the community. Much has been accomplished through federal aid, but much more needs to be done.

10. Juvenile delinquency, organized crime, and commercial rackets are among the vexations of the city. None of our reforms in the field of criminal justice has successfully come to grips with these persistent urban problems.

11. Urban public finance is another emerging problem of vast proportions. In the recent depression, urban areas pouring millions into the national treasury

were forced to pass the hat, begging for financial support. The anomaly of the situation is the fact that the forty-eight state governments which determine the local systems of taxation are from the standpoint of total expenditures only one-half as important as all the local governments they must control. Our largest cities alone, New York, Chicago, Boston, and Detroit, have larger budgets than the states which contain them. The problem of municipal finance is becoming even more complicated with the extension of federal and state taxation to support the newer services of government such as social security and extensive public works.

12. Another of the city's wealthiest tasks is the adjustment of the traditional scope of urban powers. In spite of its vital and growing significance as the principal instrument of public service and community control, the American city is still the legal creature of higher authorities, subject to their fiat for the most minor of powers and procedures, reaching down in one state to legislation to permit the peddling of peanuts on a municipal pier. The city is in many ways the ward of a guardian who refuses to function.

13. Our overlapping medley of independent governmental units was intended for a rural and a manorial society but never for the sprawling metropolitan regions of America and the satellite suburbs. The concrete facts of our urban and administrative life frequently defy state lines and local control. Twenty-two of our 96 metropolitan districts containing 26,000,000 or one-fifth of all our inhabitants, straddle state lines and call for a larger measure of interstate and federal co-operation in certain fields than is now found.

14. We have made striking technical advances in municipal government and for years now we have developed, contrary to opinions widely held, skill and talent and expert knowledge among our municipal career officers, but we are still faced in some cities with systematic evasions of civil-service laws, irresponsible political leadership, and official tolerance of discriminatory or questionable administrative practices.

All in all there has been more widespread national neglect of our cities than of any other major segment of national existence. Whether this is to be attributed to the absorption of our best efforts by the demands of our commercial and industrial system, or by other pressing claims of national policy, it is evident that America must now set out to overcome the continual and cumulative disregard of urban policies and administration and to take into account the place of the urban community in the national economy.

For lack of space we are unable to direct attention to the recommendations of the committee.

Here and There among the Schools

Remedial reading in elementary and junior high school grades.—For the past two or three years Superintendent Julius E. Warren, of

Newton, Massachusetts, has been carrying forward a program of remedial reading in the elementary and junior high school grades. The work has been under the general direction of C. Elwood Drake, director of research and guidance, who has supplied us with three mimeographed bulletins describing the purpose of the program and the methods adopted to carry it into effect. The bulletins discuss such matters as the following: "Aims of the Program," "Procedures in Selecting the Cases Which Require Individual Study," "Organization for Instruction," and "Instructional Materials." Mr. Drake reaches the following conclusions with respect to the efficiency of regular classroom teachers in giving instruction to regular classes of pupils who are retarded in reading.

1. Efficient reading instruction can be carried on with slow divisions of pupils by their regular classroom teachers. No specific periods need to be set aside in these classrooms specifically for reading instruction. However, for certain individuals in these slow divisions specific remedial-reading instruction with the special teacher may be a great help.

2. Improvement of reading skills should be a natural outgrowth of regular class work in the subjects which all pupils on that grade level are taking. Teachers of these divisions should be made conscious of the specific reading difficulties of their pupils and should have a strong desire to improve the reading difficulties of the pupils.

3. It is probably desirable that these slow pupils be grouped according to their level of reading achievement. When all pupils in the slow division are at approximately the same level of reading achievement and have the same mental capacities, it becomes a problem of teaching reading to these pupils as a class group rather than a problem of remedial-reading instruction to individual pupils within the group.

4. Success in teaching reading skills can be stimulated if proper instructional materials with which to work are placed in the hands of teachers and pupils. These materials must have a vocabulary level simple enough for these pupils to comprehend, yet an interest level mature enough to hold attention.

5. Workbooks, teacher-made checks and tests, and competitive drills are helpful devices in improving reading skills. Visual materials appeal to these pupils, and they like to see their work and progress recorded in front of them. Constant written checks give pupils a greater sense of security and stability, and they are enabled to know where they stand comparatively in each reading skill at a given time.

A program of teacher home visitation.—It is coming to be recognized that teachers should spend more time in studying their pupils even

at the expense of less time in teaching them. The teacher should know each child as an individual; she should know, so far as possible, his purposes, needs, and interests. To understand a child as a person, a teacher must know, in a general way at least, something of his total environment. It is important that the teacher understand the social pattern of the community in which the child lives; it is imperative that she have some insight into the conditions of his home life. Home visitation, therefore, should be an important part of the teacher's work.

W. Paul Allen, principal of the Garfield Heights Elementary School, Cleveland, Ohio, has worked out a carefully planned program of teacher home visitation. Mr. Allen has supplied us with the following description of his program.

It should be pointed out that the work of the teacher in visiting the home is not meant to supplant the work of the visiting teacher. The visiting teacher is a specialist in this field. He should be called in by the teacher when it is apparent that further study of the home is needed and a follow-up program is likely to be necessary.

In our school of approximately a thousand pupils and thirty teachers, we have a definite program of teacher home visitation. Sometime during the autumn months of the school year, the teacher makes a friendly call at the home of every pupil in her class. On return to school she files a form report of her observations. On the report the teacher makes note of the economic status, the social atmosphere, and the educational environment. The following explanations of these terms are copied from the report form used by the teacher in reporting her visit.

"1. *Economic status.*—It will be helpful to you and to the school for you to observe the general financial status of the home insofar as it can be determined by casual observation. Does the family appear to be well clothed and fed?

"2. *Social status.*—What is the general social atmosphere of the home and the surrounding neighborhood? Is there evidence of a clean and healthy home situation? Is the child allowed a reasonable amount of social life in the form of entertainment and play? Is the general atmosphere of the home pleasant or depressive? What is the attitude of the child toward his parents? Of the parents toward the child? Of the parents toward the school?

"3. *Educational environment.*—Would you consider the home environment cultured, average in its refinement, or crude? What is the attitude of the family toward education? Did you inquire concerning the child's health habits as, for instance, eating or sleeping? Is there evidence of any attempt on the part of the parents to make a healthy educational home environment by provid-

ing books, magazines, a quiet place, and a definite time for home study? Do the parents speak English?"

Certain principles have been developed from this program which we have been following for the past four years:

1. The teacher never visits a home if there is reasonable evidence that her visit is not desired by the parents.

2. Whenever possible the teacher tries to accompany the child home.

3. The teacher has something definite in mind to talk about on each visit.

4. It is often advisable to have a conference with the child before visiting the home. The teacher may discuss such things as: child's interests, hobbies, activities in school and out. It may be she can learn of a home problem that she can look for on her visit and later give help to the child.

5. Great care is taken to make the first visit a friendly one. The teacher always has something good to say about the child.

6. No questions are ever asked that would in any way embarrass the parents.

7. When the teacher thinks it best, she tries to time the visit so that she can meet both parents.

8. The teacher is careful to refrain from discussing personalities or politics.

9. She avoids discussion of other teachers or other children.

10. Sometimes it is difficult, but the teacher attempts to avoid having the parents criticize the child in front of the teacher.

Some of the more important principles are listed above. The list is not meant to be complete. The final question is, "How do the teachers find time to make the visits?" Our answer is, "How does the teacher find time to teach the children?" If she has to eliminate something else from her program for a while, I don't see what it is that is more important and should not be sacrificed for this part of her work. Perhaps the question can be answered another way. Home visits pay big dividends. Once the teacher has shown that she is truly interested in the child—so much so that she is willing to pay the home a visit—she has won the respect and confidence of the parents. Many problems which would later take hours of her time never arise because mother and dad know Mary's teacher and she must be right.

A new approach to public relations in Cincinnati.—In its campaign to secure an adequate tax levy for the schools, the Board of Education in Cincinnati has adopted what, so far as we know, is a novel procedure in public relations. The board has employed an advertising firm, which takes the data supplied by the director of research in the city school system, picks out the materials which seem to be the most important, and prepares a folder for distribution to the public. The folders prepared in this way are distributed by a commercial distributor instead of being taken home by the pupils. This

new arrangement is intended to avoid the resentment which some parents feel when children are used as the means of distribution. It secures, moreover, a complete coverage of every family in the city.

Reform in the Belgian Elementary Schools

The following account of the significant reforms being introduced into the elementary schools of Belgium is taken from *Internationale Zeitschrift für Erziehung* (International Education Review). The statement was prepared for us by Mrs. S. W. Downs, Berkeley, California.

The new curriculum for the three lowest grades of the Belgian elementary school was set forth in an official publication May 13, 1936, by the minister of education. This memorandum, however, merely presents the general new principles which are to govern elementary teaching, leaving the development and application of them largely to the initiative of the teachers. Although it makes increased demand upon them, the teachers have welcomed the plan enthusiastically. It sets forth the aim of the reform as follows: While giving due heed to the teaching of certain basic subjects, such as reading, writing, and arithmetic, and other matters considered indispensable in modern living, equal care must be used in the character development of pupils, not to make "wells" of them, but living springs, and to train them how to govern their thought as well as their conduct. The foundation for subsequent studies, such as history, science, geography, etc., must be laid without the use of schematic method but by means of abundant material and quickened outlook. The teacher is to be guided by his own judgment, his knowledge of child psychology, and the science of education. The new education constitutes a break with the old and outworn educational formalism and is based on the child himself, his interests, his spontaneous activity, his natural development, in an atmosphere of serenity. In these elements all instruction is to center.

One of the primary principles of the new method of instruction is the study of the pupil's milieu through active observation.

The child's interest is to be the determining factor, the teacher's function being to guide and direct, as the child's horizon widens. However, for the purpose of giving some concrete instructions for the application of these very general principles, the following important recommendations are set forth:

1. While the study of milieu is basic and serves as the point of departure for the educational program, it does not necessarily require the major part of the time.

2. The acquisition of a great fund of information and knowledge is not to be made the aim of such study. Rather should certain simple and clear ideas be obtained, not from books and abstractions, but from the child's actual life.

These are then to be defined and fixed by conversation, drawing, manual activity, arithmetic, oral work, and reading.

3. The principle of concentration is to be employed in such instruction; that is, all is centered in one topic or interest.

4. The teacher should be thoroughly acquainted with the milieu. He does not, however, convey his own knowledge to the child but inspires and guides his pupil to discover and learn at firsthand.

5. To open the child's eyes to behold the real and to unite class work with the realities outside the school—such is the principle. This does not mean concentration only on the material and the practical. The moral side, including emotions, sympathy, kindness, and justice, is also a reality. It should be remembered that the images, impressions, and affections of early childhood dominate the child's entire life.

For further guidance in the application and development of the general principles to be incorporated into elementary education, the following procedure is suggested:

1. The choice of subjects and their sequence are often suggested by the seasons; by local work, practices, and customs; and by the life of the child in his home, in school, in his games and activities.

The four basic and vital needs underlying the Decroly program should be delimited in these studies.

2. While the immediate environment is the ideal domain for the child's activity, the field of his knowledge and interest must necessarily extend beyond the concrete reality. By detaching thought from a limited environment, from personal, subjective, and transitory interests, more objective and general interests may be awakened in the pupil. Geography and history lend themselves admirably to this purpose of expanding the child's horizon.

Pupil exchanges between schools in different localities, if they can be arranged, are most valuable aids to this end.

3. Powers of observation must be quickened and developed.

4. The work on a certain subject may assume various forms, such as systematic class exercises, individual assignments for outside study subsequent to questionnaires or mutual suggestions, free studies;

5. Class trips, after due preparation and with definite aims. These may include visits to places of industry, to farms, to scenic spots, to places of business, or to places of historical interest, for firsthand information and inspiration.

6. Nature-study, which affords infinite possibilities of application, among which are school gardens.

The official program recommends that the child's interest in games and his various activities serve as a medium for the study of arithmetic. Mechanization is absolutely to be avoided.

The study of milieu during the first four years of school is not to be an end in itself but to serve as a foundation for the further study of history, geography, and natural science.

The new program is a challenge to the initiative, resourcefulness, powers, and technique of the Belgian teachers, making high demands on their time and efforts. This challenge, from the enthusiastic reception accorded the program by the teaching personnel, they stand ready to meet.

A Handbook for Inducting New Teachers into Service

Teachers, experienced as well as inexperienced, must make many adjustments when they take up their work under new leadership, with new associates, and in a strange community. In some way new teachers must be brought to understand the significant and distinctive policies of the administration, the details of ordinary school routine, the personalities of the other members of the teaching staff, and the mores of the community in which they are to live and work. Many teachers make mistakes in the early days of their service which can never be overcome and which, under proper guidance, could have been avoided altogether. Moreover, to shorten the period of adjustment and adaptation is to contribute to the general efficiency of the school system.

Galen Saylor, director of the Department of Research of the Nebraska State Teachers' Association, and a group of consultants have prepared a bulletin, entitled "Inducting New Teachers into Service," which is intended as a handbook for administrators. The following statement is quoted from the Foreword.

Each year from one-fifth to one-third of the public-school teachers of Nebraska are new to their respective positions. The waste and inefficiency resulting from this large amount of turnover is great. The resulting problem, then, is a twofold one: first, to decrease the per cent of annual turnover as much as possible, and second, to increase the efficiency and effiectiveness of the new teacher wherever turnover does occur.

The purpose of this bulletin is to aid school administrators in accomplishing these objectives. Inducting the new teacher into service in the school is an important administrative responsibility. Proper induction will do much to eliminate turnover waste. From the standpoint of the new teacher, it represents the difference between trial-and-error adjustment and planned technique.

The bulletin is offered as a handbook of suggested methods, plans, and procedures for inducting new teachers. Many administrators are now using most or all of the methods given here. However, it is easy for the busy superintendent to overlook some of the most important induction details in the rush of duties at the beginning of the school year. This bulletin will serve as a check list to such superintendents. Other administrators have done very little of an orderly

nature to induct the new teacher into the school system. This bulletin should serve to emphasize the importance of proper induction and should stir them to action in discharging this administrative responsibility.

In addition to serving as a check list of suggested techniques, the bulletin may be used in other ways. Some of the items listed offer excellent subjects for faculty meetings, important ones being: "Professional Organizations and Relationships," "The Teacher's Relation to the Community," "What Is a Good Teacher?" and "What Constitutes Professional Growth?" Perhaps the school faculty can be interested in this whole problem of induction and local committees be organized to aid in preparing the handbooks and local community data.

This bulletin may be secured for twenty-five cents from the Department of Research, Nebraska State Teachers' Association, Lincoln, Nebraska.

The Status of Rural Education in the United States

Two recent publications of the United States Office of Education contain information which reveals the inadequacy of the educational facilities now being provided the rural youth of the nation. The following facts about rural education in this country are taken from the first of these publications, the advance pages of chapter v of *The Biennial Survey of Education in the United States: 1934–36*, Volume I.

Despite the phenomenal urban concentration of population which has taken place in recent years, approximately half the nation's children still attend rural schools. Of the ten and three-quarter million children attending rural public elementary schools, 30 per cent attend one-room schools and 13 per cent attend two-room schools. The average length of the school term in days is materially shorter in rural than in urban schools—it ranges from 160 days in one-room rural schools to 182 in city schools. Rural children are taught by teachers who, as a class, are poorly educated and poorly paid. Twenty-four per cent of the teachers in one-room schools have a high-school education or less, and the same is true of 17 per cent of the teachers in two-room schools.

The average salary of rural teachers is $787; the average salary in city schools is $1,735. The average current expense per pupil attending rural schools is $53 as compared with $93 for urban schools.

The second publication is entitled *Status of Rural-School Supervision in the United States in 1935–36* (Pamphlet Number 72). It shows that, although there has been in recent years some improvement in the supervision of rural schools, the great majority of these schools still are poorly supervised or lack supervision altogether. The situation for the whole country is summarized as follows:

> Summarizing the situation for the nation as a whole, it appears that there are at present twenty-eight states in which at least a beginning has been made by county and similar types of rural-school units to employ professionally trained supervisors for the rural schools; in about ten of them practically all rural schools now have the benefit of such supervision. To these twenty-eight, there should probably be added the New England states, at least Massachusetts. The rural schools in many localities of these states are apparently adequately supervised by the local school officers. If the five New England states were added, the total number of states in which one or more rural-school supervisors were employed would stand at thirty-three. Of the remaining fifteen states, fourteen definitely report that no such supervisors were employed in 1935–36 and one, North Dakota, failed to provide definite information. If not entirely lacking, county rural supervision is known to have made very little progress in this state.

Who's Who in This Issue

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INFORMATIONAL BACKGROUND AS A FACTOR IN READING READINESS AND READING PROGRESS

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Teachers and other persons responsible for reading work in the schools are often perplexed by the difficulties that children experience in learning to read. The causes of these difficulties are many, and to reduce them to a minimum requires highly developed techniques. The problem involved is many-sided and must be attacked from more than one point of view if a satisfactory solution is to be secured. This study has as its purpose an investigation of the bearing of a rich informational background on reading readiness and reading progress. The biological, attitudinal, and intellectual factors in reading readiness and reading progress are intermingled, and they must be considered as basic to success when reading is viewed in the light of the broadened objectives included in present-day educational philosophy.

METHOD USED IN THE STUDY

In the spring of 1933 the writers, with the assistance of the kindergarten teachers in the Kalamazoo public schools, set out to make a study of the informational background of certain kindergarten children then enrolled and to carry the study through Grade II in order to note the relative effects of rich and meager informational backgrounds on reading readiness and on progress in developing fundamental reading abilities as measured by recognized reading tests.

Two groups of children were selected for the study. The selection was based on the judgment of the teachers, supplemented by data given by the principals and the visiting nurses or by information collected in the preschool health clinic. Subsequently the Stanford Revision of the Binet-Simon Intelligence Scale was administered, and no child was included whose intelligence quotient indicated that he

was below normal in intelligence. Seventy children were selected for study. This number had dwindled to sixty-six at the time of the final testing in January, 1936, the others having moved from the city.

Brief statements were made by the teachers concerning each child, which gave the writers some idea of the child's personality traits. The following are examples of the comments made.

Case I: Child has a very good home background. Mother much interested in child's progress and very co-operative. Will do anything asked of her. Visits school and consults teacher. Child is very self-conscious. Is often silly because not sure of himself in a new environment, although has overcome this to a great extent, as kindergarten activities have appealed to him. Is very willing to try and is open to suggestions. Paints and draws at home as well as at school.

Case II: From a good home but is very inattentive and needs to have a good deal of individual attention. Has workable ideas, but is immature in many ways. Mother is much interested. After careful explanation of why some things are better to do than others, usually will do what is asked of her.

Case III: Comes from a poor home where there is a large family and little opportunity for own initiative. Is very shy and afraid to try anything new, probably because of lack of opportunity for self-responsibility at home. Talks very little. Is always clean, showing good care in a physical way. Needs much encouragement in experimenting with materials or doing anything where he must take the responsibility.

Case IV: Comes from poor home with background lacking stimulation. Enunciation poor as a result of talking too fast to allow distinct utterance. Is very likely to be disturbing in the group probably because she has not yet learned to play with others or to use available materials alone.

The opportunity for a child to acquire a rich informational background was further studied by means of an extensive but easily checked questionnaire which was sent home asking for concrete and detailed information about the child's preschool experiences. The questionnaire covered the following nine main topics: (1) occupation of parents; (2) number of older and younger brothers and sisters; (3) travel experiences of the child; (4) mechanical means of communication in the home; (5) social experiences in the home; (6) the child's language and conversational inclinations; (7) the reading environment; (8) factors affecting the child outside the home, such as play, contacts in the neighborhood, going to movies and to Sunday school; and (9) other noteworthy experiences mentioned by the parents.

Intensive study of the questionnaire replies convinced the writers

that for the purposes of this study the two groups selected were enough different to be designated as the "rich-background group" and the "meager-background group." The reader may note this contrast by the brief summary given in Table 1.

TABLE 1

COMPARISON BETWEEN RICH-BACKGROUND AND MEAGER-BACKGROUND GROUPS

Item	Rich-Background Group	Meager-Background Group
Average number of brothers and sisters	1.1	4.5
Travel experiences:		
Percentage of children traveling more than 4,000 miles	27	5
Percentage of children traveling less than 1,000 miles	31	75
Average number of unusual experiences in travel per child	12.2	4.3
Mechanical means of communication in home:		
Percentage of families having cameras	50	30
Percentage of families having motion-picture projectors	10	0
Percentage of families having phonographs	66	40
Percentage of families having radios	84	70
Percentage of families having telephones	84	5
Percentage of families having typewriters	42	5
The reading environment:		
Average number of newspapers in home	1.6	1.1
Average number of magazines in home	3.9	1.0
Percentage of families using library books	75	65
Percentage of families reading much to child	61	50
Percentage of families having fewer than 25 books in home library	27	63
Percentage of families having fewer than 5 children's books	15	65
Percentage of families reading comics regularly to child	45	15

Still further evidence of differences between the two groups was obtained by testing the children with standardized tests chosen by the writers and recommended by the Research Department of Western State Teachers College. For this purpose the Sangren Information Tests for Young Children,[1] the Smith vocabulary test,[2] and the Healy Pictorial Completion Test[3] were used, and the writers

[1] Paul V. Sangren, Information Tests for Young Children. Yonkers-on-Hudson, New York: World Book Co., 1930.

[2] Madorah Elizabeth Smith, *An Investigation of the Development of the Sentence and the Extent of Vocabulary in Young Children*, p. 51. University of Iowa Studies in Child Welfare, Vol. III, No. 5. Iowa City, Iowa: University of Iowa, 1926.

[3] William Healy, "A Pictorial Completion Test," *Psychological Review*, XXI (May, 1914), 189–203.

assumed that these measure, respectively, range of information, vocabulary, and ability to solve simple problems. These tests as well as the others mentioned in the study were given by well-trained students, usually Seniors or Juniors, in Western State Teachers College. Table 2 gives the comparison of the medians and the quartiles of the

TABLE 2

MEDIAN AND QUARTILE AGE SCORES OF RICH-BACKGROUND AND MEAGER-BACKGROUND GROUPS ON THREE TESTS GIVEN IN SEPTEMBER, 1934

Test	Age Scores in Years and Months	
	Rich-Background Group	Meager-Background Group
Sangren Information Tests for Young Children:		
Upper quartile	7-6	6-8
Median	6-8	4-9
Lower quartile	5-9	4-3
Smith vocabulary test:		
Upper quartile	6-0	5-0
Median	5-0	4-3
Lower quartile	4-0	3-6
Healy Pictorial Completion Test:		
Upper quartile	7-6	7-0
Median	6-7	5-0
Lower quartile	5-8	4-1

two groups. So far as median and quartile scores are concerned, Table 2 reveals a distinct advantage in favor of the rich-background group.

INFORMATIONAL BACKGROUND AND READING READINESS

The two groups were next measured for reading readiness by means of the Lee-Clark Reading Readiness Test[1] and the Stone-Grover Classification Test for Beginners in Reading.[2] As the results

[1] J. Murray Lee and Willis W. Clark, Lee-Clark Reading Readiness Test. Hollywood, California: Southern California School Book Depository, 1931.

[2] Clarence R. Stone and C. C. Grover, Classification Test for Beginners in Reading. St. Louis, Missouri: Webster Publishing Co., 1933.

on the two tests were not far different, data from the Lee-Clark test only are included in Table 3. This table shows that the skills or abilities measured by the test were widely distributed in both groups. Some children of the meager-background group made high scores while some of the rich-background group made low scores. When the

TABLE 3

DISTRIBUTION OF PUPILS IN RICH-BACKGROUND AND MEAGER-BACKGROUND GROUPS ACCORDING TO SCORES ON LEE-CLARK READING READINESS TEST GIVEN IN SEPTEMBER, 1934

Score	Rich-Background Group	Meager-Background Group
46–48	4	4
43–45	3	1
40–42	2	.....
37–39	2	.....
34–36	5	2
31–33	6	3
28–30	3	1
25–27	3	2
22–24	2	3
19–21	1	5
16–18	.....	6
13–15	1	2
10–12	1	3
7– 9	1	1
4– 6	1	1
1– 3	.....	1
Total	35	35
Upper quartile	40.4	32.2
Median	33.2	21.1
Lower quartile	26.8	16.4

median and the quartile scores are compared, the rich-background group is shown to have had a distinct advantage. Lee and Clark say in their test manual that pupils scoring below 23 on the test are likely to fail while those receiving scores of 12 or less will probably fail. Five of the thirty-five pupils in the rich-background group received scores of less than 23, while nineteen of the thirty-five in the meager-background group made such scores. The former group had a significant advantage in reading readiness as measured by this test.

INFORMATIONAL BACKGROUND AND READING PROGRESS

Progress in learning to read was measured at two levels. In March, 1935, when the children were in Grade 1.6, the Gates Primary Reading Test was given. Again in January, 1936, when they were in Grade 2.4, a second form of this test was given. The results are shown in Table 4, which was constructed to show the contrast

TABLE 4

MEDIAN AND QUARTILE GRADE SCORES ON GATES PRIMARY READING TEST MADE BY RICH-BACKGROUND AND MEAGER-BACKGROUND GROUPS AT TWO TESTINGS

Test	Rich-Background Group			Meager-Background Group		
	Upper Quartile	Median	Lower Quartile	Upper Quartile	Median	Lower Quartile
Form I (March, 1935):						
Type 1. Word recognition	1.8	1.5	1.3	1.6	1.5	1.3
Type 2. Word, phrase, and sentence reading	2.3	2.2	1.5	2.0	1.6	1.5
Type 3. Reading of directions	1.8	1.7	1.6	1.7	1.6	1.4
Entire test	1.9	1.8	1.6	1.8	1.6	1.5
Form II (January, 1936):						
Type 1. Word recognition	3.3	2.7	2.2	2.6	2.4	1.6
Type 2. Word, phrase, and sentence reading	3.2	2.6	2.3	2.8	2.4	1.6
Type 3. Reading of directions	3.5	3.0	2.2	2.6	2.3	1.8
Entire test	3.3	2.9	2.1	2.7	2.3	1.7

between the quartiles and the medians on the three types of ability measured by the Gates Primary Reading Test. The rich-background group had slightly higher mental ages, but the difference was not statistically significant. A study of this table reveals that the rich-background group made more rapid strides in the average reading scores than the other group, being two months ahead of the meager-background group and two months ahead of the grade standard at the time of the initial testing, and being six months ahead of the meager-background group and five months ahead of the grade standard on the second testing. The meager-background group was one month below standard at the time of the second testing.

A more significant generalization to be arrived at in studying this table is the superiority of the rich-background group in the more complex abilities represented by test Types 2 and 3, the abilities to comprehend sentences and paragraphs. If the writers' point of view is correct that word-recognition ability is simpler than either sentence or paragraph comprehension and that the more complex the ability, the greater the need for suitable background for interpretation, then it seems plausible that progress in word recognition would proceed in about the same ratio for the two groups. The data show only a slight superiority for the rich-background group when the two testings in word recognition are considered together, but sentence comprehension and paragraph comprehension seem to be considerably affected by the nature of the background. This point is significant because comprehension of sentences and paragraphs requires mature ability in reading and is closely allied to the modern conception of obtaining a rich and varied experience through reading.

EDUCATIONAL IMPLICATIONS

A study of this kind is valueless unless its findings are made practical in educational practice.

The study indicates that, if a careful study is made of children in the kindergarten, a better classification can be made in Grade I before reading activity is begun. The first-grade teacher who understands what informational and experience backgrounds are possessed by the children coming to her and who is supplied with data on the children's readiness for the complicated techniques of reading, as shown by a reading-readiness test, is better able to place the pupils in groups where their needs can be met and where they can at once begin to feel the exhilaration of success. Success may be an outcome of the reading process itself, or it may come from stimulating experiences and information which give rich preparation for the reading instruction.

A careful study of Table 1 should give to kindergarten teachers a clear picture of the needs of meager-background children in becoming prepared for reading. Though distant travel cannot be furnished by the school, at least acquaintance with, and a broadening knowledge of, their own environment can be given to the children through

trips to the fire station, to the railroads, to a creamery, possibly to a farm or a dairy, to the post office, to the library, and to other interesting places. Discussions of these trips, drawing pictures inspired by them, and dramatic play make use of language and other creative expression and thus build up enriched ideas and vocabulary—a necessary basis for the reading experience.

Children can participate in the advantages of such mechanical means of communication as are available in the school: the camera, motion pictures, phonograph, radio, telephone, and typewriter. Even picking out letters on a typewriter while learning that certain letters belong in his name or in the names of his brothers and sisters is an enriching experience for a child.

A kindergarten room with a wealth of books, belonging in its own library or borrowed from the public library, opens up a new world of interest to those children who have not had opportunities of looking at books. Children who are allowed to borrow books to take home or to read at intervals during the day are stimulated with a desire to use books, to hear stories, and to see pictures. This desire is the very foundation for good and growing reading ability.

Table 2 shows clearly to kindergarten teachers the value in range of information. A wide range builds a large vocabulary and many associations. The more associations, the better is abstract learning, the better the memory, the better the power to think. All these powers are needed in the reading process. Table 3 gives evidence that children with this wider and richer background have the stronger reading readiness.

If kindergarten teachers provide rich and varied experiences for children through trips, discussions, play, books, pictures, literature, art, and music; if they help children to use ideas and language in interpreting and thinking out situations; if they give children contact with written forms, such as signs, then the children will be more adequately prepared to launch into the task of learning to read with success.

In spite of the fact that the broadening of children's experiences is one of the most important factors in learning to read, teachers must not lose sight of the other important factors, such as those named by Harrison: intellectual development, physical development, and per-

sonal development.[1] Under intellectual development Miss Harrison includes such factors as breadth of experience, ability to do abstract thinking, breadth of meaningful concepts, and breadth of spoken vocabulary.

Other factors being equal, this study shows that children with rich backgrounds are more strongly equipped to attack the printed page than are pupils of meager backgrounds because of enriched meanings and thought which the former bring to this task. Research has discovered that one of the greatest difficulties encountered in learning to read is lack of understanding of words and ideas. Meanings grow through experiences and contacts. Hence one large task of the kindergarten teacher is to enrich and broaden children's backgrounds.

[1] M. Lucile Harrison, *Reading Readiness*, pp. 5–30. Boston: Houghton Mifflin Co., 1936.

ADJUSTMENT TEACHER SERVICE IN THE CHICAGO ELEMENTARY SCHOOLS

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The adjustment-teacher service in the Chicago elementary schools is a service instituted for the purpose of studying the social, mental, educational, and physical equipment of the individual pupils so that, in the light of the information obtained, the work of the schools may be organized to meet the pupils' individual requirements as far as possible.

Leaders of educational thought agree that such a service is necessary. School records everywhere are replete with cases of pupils who were stamped as failures and who dropped out of school because of their inability to keep up with the lock-step scheme of the present educational system. Little or no consideration was given to their varied personality traits, interests, and abilities. The system as set up arbitrarily imposed upon all pupils a uniform set of requirements. Those who were able to conform were considered apt; those who were unable to meet the requirements were tagged as incapable and allowed to drop out of school when the law permitted.

The adjustment service seeks to alleviate this situation and to secure for each child the success to which he is entitled. Success is an essential factor to effective education. "Nothing succeeds like success, and nothing fails like failure," says Kilpatrick. "If he succeeds today, he will be readier to attack tomorrow."[1] Educators have long recognized the need of reorganizing the work of the elementary school so that each pupil may receive the *individual* instruction and attention necessary to insure him his due measure of success. It is not because the child does not try that he fails, but because the tasks to which he has been assigned are either too simple or too difficult. If the work is too easy for him, he may become a dis-

[1] William Heard Kilpatrick, *Foundations of Method*, pp. 62–63. New York: Macmillan Co., 1925.

cipline problem; if it is too difficult, he may become discouraged and lose interest. In either case the pupil experiences failure, and this experience usually leads to a succession of failures. The result is frequently a behavior difficulty. It is the writer's belief that most of the difficulties of a pupil in school are due to failure on the part of the teacher to provide the child with work which properly challenges his abilities and meets his interests and needs. Difficulties of this nature can be eliminated to a great extent by a patient study of the individual differences which are found to exist among the pupils in the school and by the development of an adequate instructional program adapted to these differences.

No uniform system of instruction can meet the requirements of the "average" child in Chicago. This fact is readily understood when a moment's consideration is given to the great divergence in the life and the status of the communities in the various sections of the city in which the elementary schools are located. Each school has problems so peculiar to itself that the solutions of the difficulties are primarily a local matter. In order that education may succeed as such and in order that the child may receive the full benefits of schooling, it is necessary for each school to make a careful study of the mores of the school population within its boundaries, the variation in the social and the economic conditions of the children's homes, the occupations of the parents, and other pertinent factors. Likewise, the mental and the physical status of the individual child must be studied and understood. When possible, deficiencies should be corrected, and, if not possible, the handicaps should be taken into consideration and provided for in the educational program. In Chicago marked cases of physical handicaps have been provided for in the cripple schools, deaf-oral rooms, fresh-air rooms, sight-saving classes, and the like. In many instances all that is required is an opportunity to make up the work lost because of frequent or prolonged absences. In some cases the emotional factor is of chief concern in making the proper adjustment of the child to his school environment.

These and many other factors must be studied in order to assist the child to make the desired adjustments. Progressive school systems throughout the country have found it necessary to concern

themselves with this problem. The various plans evolved for caring for individual differences have their merits as to educational technique and procedure. In the plan under consideration we are bearing two factors in mind: (1) We must not leave to chance the discovery of the child's interests and abilities. (2) We must not place upon the child the burden of selecting the subject matter solely in accordance with the dictates of his interests. There is no assurance that the child is sufficiently stable or developed to know definitely what and how strong his interests are. With adequate means for making a thorough scientific study of the child, we can assist and direct him accordingly. We can help him strengthen his weak spots and take advantage of his particular abilities.

To study the contributing factors in the elementary schools of Chicago, it was necessary to set up machinery for the purpose. Accordingly, in September, 1936, the elementary schools embarked on a three-point program, one point of which required the establishment of a cumulative record for each child. This record involves a legal-size folder, to be kept in a vertical file, in which are included in detail data relating to the pupil's physical, emotional, mental, social, and educational development. The intimate family information and disciplinary record are kept in the office of the principal, who also keeps a card-file record for each pupil. The cumulative-record folders are kept on file with the class teacher and follow the child as he progresses from room to room. The gathering of these data is under the supervision of an *adjustment teacher*, the selection of whom rests with the principal, the district superintendent, and the director of the Bureau of Child Study.

The present administration has assigned to the Bureau of Child Study the supervision of the adjustment-teacher service. One teacher in each of the 150 schools that are now operating on the plan is trained to assemble child-study data on individual differences, interpret them in the light of individual educational needs, and apply the data to *individual* learning techniques and *remedial* procedures in the classrooms. The staff of the Bureau of Child Study can never be made large enough to study all the individual needs of Chicago's half-million children. There are many teachers, among our thirteen thousand, with special talents and interests in the study and treat-

ment of individual differences of children, who with adequate training and supervision by technicians from the bureau can, as adjustment teachers, do much for the children. The plan, eventually, is to have every classroom teacher make a study of her children's individualities with the assistance of the adjustment teacher. The adjustment teacher, it should be said at the outset, is not in charge of a classroom.

The qualifications for such a teacher require that she be a superior teacher with a wide experience in the grades. Her academic training should include work in tests and measurements, elementary statistics, psychology, and special methods, but the factor of personality is probably the most important consideration. She must be pleasant, cheerful, sympathetic, and well poised; possess ability to deal with other people; thoroughly understand children; possess a friendly attitude toward them; and possess ability to gain their confidence and inspire them to have confidence in themselves. She must know how to give and score all types and kinds of tests. She supervises the giving and the scoring of tests by other teachers. She supervises the use of the health-appraisal blanks and assists in arranging for physical examinations of one type or another, following up cases needing correction and making contacts with such agencies as are necessary to make the correction. In emergency cases she visits the home and makes the necessary investigation.

It is her duty to interpret the educational profiles and graphs when necessary to assist the classroom teacher in assigning individual instructional materials; to assist the principal in making case studies; to aid in the selection of cases for special treatment by the teacher or for expert study by the Bureau of Child Study or in the selection of special cases to be handled by herself. She supervises the filing of all the children's cumulative records in the classrooms and in the office. She tests the children's vision and hearing. The adjustment teacher prepares and assists the classroom teachers to prepare materials for use in remedial instruction in the various subjects, particularly reading. All remedial instruction is entirely of an individual nature. Rarely will two pupils be found in the same room whose requirements are identical.

The classroom teacher allots approximately thirty minutes a day

to remedial instruction. She is responsible for restoring to their normal grade level, or a grade level appropriate to their mentality, those pupils retarded in any subject of study not to exceed approximately a year to a year and a half. The pupils in all instances are selected for remedial instruction through the testing program under the direction of the adjustment teacher. The latter maintains special records and graphs of progress for such pupils. She likewise maintains in her own room or office a library of individual instructional materials, which are available to the classroom teachers at all times.

Through the co-ordinating efforts of the director of the Bureau of Child Study, these adjustment teachers are provided with the pooled resources of all the adjustment teachers in the system. Frequent meetings are held for the purpose of studying new techniques and procedures and for acquainting all with the benefits of one another's experiences.

It will be noted that the responsibility for the bulk of the remedial instruction remains with the classroom teacher. The adjustment teacher devotes possibly a third of her time to actual remedial instruction, working only with the most seriously retarded cases. It should be said at this point that children whose intelligence quotients are in the sixties are placed in so-called "opportunity rooms" with specially trained teachers. Chicago schools have about 260 of these rooms scattered throughout the schools. The average membership of this type of class varies from fifteen to twenty pupils. The instruction is largely individual, and considerable handwork is provided in their curriculum.

We may summarize the duties of the adjustment teacher briefly as follows: (1) has charge of testing program for the school, (2) selects pupils for remedial instruction, (3) offers suggestions to teachers, (4) prepares remedial-instruction materials, (5) co-operates with the Bureau of Child Study, (6) devotes about a third of her time to actual remedial instruction, and (7) assists teachers in making special provision for the bright pupils.

Under the old plan the teacher was the active and determining factor which forced the child to learn. Under the adjustment-teacher service plan, the classroom teacher, assisted by the adjustment teacher, is a guide, adviser, and stimulator. She requires of the pu-

pils no uniform standard of achievement. Instead, she encourages the pupils to apply themselves to the best of their abilities.

The adjustment teacher gathers all the available information about the children. She maintains contact with them throughout their stay at the school. If a pupil should transfer to another school or be graduated and enter high school, she transfers the records accordingly. In this manner she does all that is possible to insure his success in the new school. Thus, we have a closer articulation between the schools. With the accumulated data it remains for her to adapt the educational procedure to his requirements, to direct the solution of his problems, and to reorganize and revitalize the work of the school to permit the individual to lead a happy and successful school life.

Some explanation should be made concerning the general nature of the materials used by the teachers. A large amount of pupil-managed, individual learning materials have been organized and prepared by the teachers themselves. These exercises are on the child's level and are of sufficient length to hold his interest but not too long to kill it. The pupil must have sufficient freedom to permit him to do the work at his own rate of speed. Various sources of information may be used. If textbooks are used, they are supplied as reference aids and not for mere memory or drill purposes. The units of work may involve the solution of problems in the social sciences, arithmetic, or directed remedial reading. The materials are so prepared that they may be used over and over again by other pupils of the class. All exercises are organized in terms of the child's interests, needs, and abilities to insure his best possible attention. In some instances the materials are so arranged that rapid checking, distribution, and filing can be done with great facility by pupil assistants under the supervision of the teacher. This scheme permits the teacher to devote more of her time to special cases and problems as they arise. Additional materials of this type are being developed by the adjustment service.

When pupil-managed, individual learning materials are used, the pupil is given a work-record card on which the teacher has listed the required work. The pupil then takes this card to a pupil file clerk who distributes the jobs in the order assigned. As the pupil com-

pletes the work, it is checked, returned, worked again, and rechecked by pupil checkers until it is mastered. The teacher checks only the final test for mastery. In this scheme the slow-learning child can experience success; the fast-learning can acquire proper study habits; and the returned absentee can begin where he left off. Thus all levels of ability and achievement are provided for. If the work is too difficult or too easy for the pupil, the teacher makes adjustments accordingly; consequently, each child is a success in his own social group and is therefore a member, rather than an outcast, of that group. His self-respect is preserved and maintained.

With the pupil-managed materials certain attributes of character come into play: reliability, courtesy, honesty, self-management, co-operation. To be sure, these are intangible qualities, but they are factors which help to make pupils active participants rather than passive recipients.

Working closely with the adjustment teachers are the assisting psychologists from the Bureau of Child Study, of whom there are twenty-seven, whose duties are to assist in the establishment of the service within a given school, train the adjustment teacher in the techniques of child study, assist the adjustment teacher in interpreting the data and applying the proper procedures, and assume for further study cases recommended by the adjustment teacher.

The central office furnishes the adjustment teacher with all the materials and clerical help needed to establish the system. If a visit to the home is required and the teacher is unable to go, the central office will send such a visitor upon request.

While *all* the elementary schools in Chicago have installed a cumulative-record system in accord with the three-point program, only 150 schools have instituted the adjustment-teacher service. Eventually all schools will be equipped with the service. Adjustment teachers necessary to fill vacancies created by the gradual expansion of the service will be trained by the Bureau of Child Study. Specialists required for the staff of the bureau will be recruited from among the active and successful adjustment-service teachers. Through this plan it will be possible to secure for the schools a psychological service of the highest quality. Not only will the staff possess a knowledge of psychological techniques, but also it will

possess a broad knowledge of classroom management, classroom procedure, and an understanding of educational problems and aims.

Thus, through the adjustment-teacher service the administration is endeavoring to give to each child the success to which he is entitled. The only criteria at present by which the success of the service may be judged are the enthusiasm of the principals in whose schools the service exists and the demand from other schools for the installation of the service. Principals and teachers, as never before, are concentrating on the individual needs of the children: we are becoming "individual-pupil conscious."

With the co-ordination of all the facilities of the system and the development of new materials and procedures, we hope to reduce failures and the repetition of grades. As a result the costs of education should be materially reduced. By far the greatest value, however, will be the happiness of the children. Needless fears will be eliminated, and learning conditions will be provided which will free pupils from undue pressures and worry. Their abilities challenged, their interests aroused, and their needs provided for, it is expected that an eagerness to work and achieve success will result—a far-reaching contribution to the welfare of the community and the city.

AN ENGLISH UNIT IN BIOGRAPHY FOR THE UPPER GRADES

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As the current history of many nations tends to indicate, the age in which we live is one that focuses its attention on individuals. This modern interest in personalities is, of course, reflected in contemporary literature. Library records of circulation, lists of best-selling books, and other criteria of the public's reading appetite will convince any investigator that biography, as a form of writing, has been steadily gaining in popularity during the past several years.

In many courses of study in English the unit in biography is reserved—and perhaps justifiably so—for the senior high school years. In the University High School, however, it was felt that such a unit of study might prove worth while with a special group of junior high school pupils among whom interest in real events and real people ran high. The flexibility of the unit, its adaptability to a variety of library situations, and the results obtained from it have caused the writer to feel that a description of the procedures employed might be of interest to other teachers of accelerated or specially grouped junior high school pupils.

The class in which this unit was first taught was composed of nineteen pupils who had completed the first six grades of elementary school and who were selected, on the combined bases of scores on standardized tests of intelligence and achievement and marks already received in school, as superior students. These children followed a special program designed to cover the essentials commonly taught in Grades VII and VIII and to equip them for the regular ninth-grade work which they were to pursue during the following year.

The purposes of the unit were many. Class discussions and conversation with the pupils outside the class indicated that these young people were keenly interested in realities—real events, real people.

The teacher, of course, wished to capitalize on this general interest and from it to develop in the pupils a new field of reading interest. From the standpoint of the pupil the chief aim was to become acquainted with famous persons of the past and the present. As the work progressed, of course, the pupils found that many incidental aims must be met. In the first place, they must be able to use the biographical materials in the school library in order to prepare their oral contributions to the class. It was necessary, too, to select information from their reading, to organize and present their data in clear and meaningful form, and to develop a simple system of taking notes on the material presented by other members of the group. Finally, it was necessary to use the information thus gained in acceptable written form.

On the first day of the unit the class met in the library. At that time the teacher introduced and gave the pupils opportunity for practice in the use of some of the more common biographical reference materials which the library afforded: *Who's Who in America*, *Compton's Pictured Encyclopedia*, *The Junior Book of Authors and Illustrators*, *Living Authors*, the biographical section of the unabridged dictionary, the vertical file, etc. Together with the pupils she reviewed their knowledge of the card catalogue and pointed out its application to the present unit. This discussion led naturally to a consideration of the two general biographical classifications, "B" and "920." Here, by means of reference to the books on the shelves, the pupils discovered for themselves the distinction in meaning of the classification terms and in the method of arrangement of the books.

Then came the most important part of the day's work: the task of motivating the pupils to read the books to be found in the biography section. In preparation for this task the teacher had compiled a list of approximately fifty books, with the following considerations in mind: (1) general readability, (2) difficulty of material or of style, (3) probable degree of interest to junior high school pupils in general and (4), most important of all, adaptability to the interests of individual pupils in the group. Consequently the resulting list was fairly representative, as these few titles will indicate: *Boy on Horseback* by Lincoln Steffens, *Davy Crockett* by Constance M. Rourke, *The*

Fun of It by Amelia Earhart, *Invincible Louisa* by Cornelia L. Meigs, *Julia Newberry's Diary* by Julia Newberry, *Lone Cowboy* by Will James, *Minute Sketches of Great Composers* by Mrs. Eva E. Hansl and Helen Kaufmann, *Over Famous Thresholds* by Ariadne Gilbert, *Six Feet Six* by Mrs. B. R. James and Marquis James, *Suzanne of Belgium* by Mrs. S. S. Farnam and M. C. McCarroll, *Tree Toad* by Robert H. Davis, and *White House Gang* by Earle Looker. In order to give the class an idea of the variety of the scope of the material contained in this section of the library, the teacher took the books on this list from the shelves, one by one, and displayed and discussed them briefly and informally. In this discussion she was assisted from time to time by pupils who happened to have read some of the books. Occasionally the teacher read particularly amusing or exciting excerpts, such as the christening from *Tree Toad*, the spitball episode from *White House Gang*, the meeting with General Sheridan from *Julia Newberry's Diary*, and the story of Jenny Lind's popularity as revealed in advertising of the day from *Over Famous Thresholds*. The teacher announced that duplicate lists of the books mentioned would be placed in the classroom and in the library, stating, however, that these lists were only suggestive and that other books might be chosen. The assignment for the following day was to select a book, to begin reading it, and to bring it to class. By this time most of the pupils had mentally made a choice on the basis of the discussion, and these children charged their books and spent the remainder of the hour in reading. The others, under the guidance of the teacher, used the time in making selections. In several cases, where pupils' choices conflicted, the children were directed to the public library to obtain duplicate copies.

The following day each child came to class with a biography which he had already begun to read. If he had found the book less enjoyable than he had expected, he was urged to exchange it at once for another which he could enjoy. The teacher then made a long-time assignment. By a definite date, approximately two weeks from that day, each pupil was to have completed the reading of at least two biographies and to have introduced to the class the people whom he had met in his reading. After some discussion the class decided that the following points should be included in each introduction: (1)

the correct spelling and pronunciation of the person's name, (2) the field in which he achieved fame, (3) the period in which he lived, (4) a picture or pictures of the person, and (5) some interesting or outstanding incident in his life. If the information given in the book itself did not cover all these points, it was to be supplemented by reference to some of the other biographical materials in the library. It was further decided that on these points the class would take brief notes while the introductions were being made, and there followed some explanation and illustration of this process. Whenever a pupil was prepared to make his introduction, he was to confer with the teacher regarding a convenient date. The first portion of each class hour during the allotted period was to be reserved for the presentation of the introductions.

With this assignment clearly in mind the pupils went ahead with their reading. Since each child was working with material which interested him as an individual, this reading was, theoretically, a pleasure. Practically, it proved itself to be precisely that if the avidity and the apparent delight with which it was carried on were any criteria. As a pupil completed his reading and proceeded with the preparation of his oral introduction, many questions necessitating library reference arose. On such occasions the pupils were free to go to the library and seemed to derive a great deal of satisfaction from being able to solve their problems for themselves. Of course, when special guidance was needed, it was given.

On the whole, the introductions were excellent. The pupils did not consider them "book reports" but actual introductions of real persons. As a result the talks were live and interesting. They were presented in clear and direct speech, principally because the other members of the class, who were taking notes on the material, demanded clearness. On the other hand, the audience listened attentively because they were interested and because they had a definite idea of what to listen for. Before a pupil began his oral presentation, he wrote on the blackboard the name of the subject; when he had finished his talk, the other members of the class were free to ask him questions about the person. These questions stimulated much lively discussion, and other members of the class contributed a great deal of interesting information concerning the per-

son and incidents connected with his life. Out of this discussion questions necessitating further library research arose. This work was undertaken, and the findings were reported at another meeting. It is impossible to present here a detailed account of the material covered in these discussions, but the following sampling of items will give the reader some idea of its scope: Amelia Earhart Putnam, other solo flights, and Miss Earhart's first attempt at a round-the-world flight; Davy Crockett, other pioneers of his day, and the story of the Alamo; Leonhard Seppala and the Alaskan gold rush; Johann Strauss and other famous bearers of the name Strauss; Florence Nightingale, the Crimean War, and the growth of hospitals; "Buffalo Bill" Cody, the pony express, and the beginning of the "Wild West shows"; Zebulon Pike and Pike's Peak. When the introductions scheduled for the day had been completed, the class spent the remainder of the hour in reading and library research. Illustrative materials were circulated in class, some of which were placed on the bulletin board for further reference.

In this manner the unit proceeded until the final day. The pupils conducted their own review in the form of a guessing game, presenting pictures and brief oral descriptions for the class to identify. As a final activity in connection with the unit, the pupils wrote a brief biographical account of each of fifteen of the persons who had been discussed in class. These accounts were to resemble those encountered in the reference books which they had used during the preparation of their oral presentations. Since this writing was done in class, it served as a check, not only on what the pupils had gained in actual subject matter, but also on their progress in written expression.

The teacher felt at the conclusion of this unit that the pupils had gained a great deal. They had become acquainted with the names of approximately fifty well-known persons of the past and the present, names which when met henceforth would have meaning. They had learned to use a library tool—biographical reference books—which would be useful to them in other studies as well as in English. The unit had afforded them practice in selecting and organizing materials, in speaking to an audience, in participating in meaningful group discussion, in taking simple notes on material presented orally,

and in putting into written form the information which they had gained. Above all, the unit had promoted new reading interests. To some pupils it opened new fields of individual interest. One girl, for example, after reading Amelia Earhart's *The Fun of It* and listening to the ensuing discussion of airplanes and flights, became so interested in aviation that she sought further information on the subject in other books and in magazines and repeatedly requested that she be allowed to report on her findings in the weekly news discussions of the class. In almost all cases the unit aroused enthusiasm for reading biographies. Of course the teacher had no objective check on this development, but observation brought to light the fact that the boys and girls in this class continued to draw biographies from the library long after the unit had terminated. They too had become interested in this popular form of writing.

CUMULATIVE RECORDS FOR ELEMENTARY SCHOOLS

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Scientific procedures developed during the past three decades have supplied educators with valuable measuring instruments and observation techniques. However, in most elementary schools the methods of recording the facts obtained by measurement and observation of individual pupils are still in an unsatisfactory stage of development. Only in the larger school systems are attempts being made to keep sufficient records to give a comprehensive picture of a developing child. Most elementary-school teachers are still too much concerned with attendance, tardiness, and enrolment statistics to find time for recording the more fundamental developmental data. It is the purpose of this article to indicate certain types of cumulative records which are desirable for the efficient management of an elementary school.

The recording procedures suggested have been developed after a careful analysis of many types of record forms now being used in both private and public elementary schools. The aim of the writers has been to present a system of recording which is more complete than that used by most elementary schools but which is less complex than the systems employed by the best experimental schools. Provisions are made in the forms for types of data which are needed by school systems seeking to render an adequate educational service in the community.

A system of records which aims at completeness must use some type of individual, cumulative folder. It is therefore suggested that a large folder of the expanding type be provided for each child. The administrator will find that the efficiency of his records will be increased many times if these individual folders are subdivided into

about six parts. Figure 1 indicates possible divisions of the materials which can be accumulated for each child. Each part or division should be filed in a separate folder within the large expanding folder. The letters designating the parts of the individual folder are used as a code on the summary card to be presented later. The order of the parts and the number of divisions made will depend on the needs and the resources of the particular school. A start can be made with a single folder, and divisions can be added as the materials accumulate.

JOHNSON, William B.

C Correspondence and Conferences	H Health	A Admission and Entrance Data	M Mental Records	P Personality	S Scholastic Record
Correspondence concerning the child Conferences: Teachers Parents Pupil Home-visitation records Discipline Tardinesses Absences Teacher's confidential reports Vocational: Interests Aptitudes Behavior log	Physical history Physical examination Vaccination certificate Illnesses Accidents Readmissions Health recommendations Corrective procedures Observations	History: Facts about the child Facts about the home Facts about the environment	Mental-test records Analysis of the test results Recommendations	Ratings Observations Evaluations Abnormalities Corrective procedures	Course achievement Standardized tests Nonstandard tests Special instruction Special abilities Special disabilities Samples of work: Commendable Extra work Re-teaching Unsatisfactory Teachers': Observations Comments

FIG. 1.—An illustration of possible divisions in the cumulative pupil folders

It may seem, at first sight, that Figure 1 implies a much too ambitious program for an elementary-school system. Careful analysis of the items suggested reveals few types of data which are not, to some extent, already available to good administrators. The suggested folders merely require that data be arranged systematically in their original forms. Sketchy notations made by a teacher or an administrator usually lose most of their significance to subsequent teachers. Shorthand symbols, such as marks, intelligence quotients, and percentile ranks, are serviceable only when the evidence is sufficient to make possible an accurate interpretation of the symbols.

Some of the divisions suggested for the folder need little elaboration. The available scholastic records, for example, will depend on the particular practices followed in a given school. It is to be ex-

pected that *some* tests will be given, that special abilities will emerge, that some disabilities will demand either treatment or a definite type of compensation, that teachers will be aware of educational growth or the lack of it, and that certain samples of work might be used as evidence of the stage of maturity reached by a child at a particular time. All these data are serviceable when it becomes necessary to construct a picture of the developmental progress of a given child.

Mental-test results should find their way into the pupil folders. If because of lack of space a mental test cannot be filed in its original form, a detailed summary of the test should be available. A mere intelligence quotient, standing alone, is not enough. The test used, the examiner, the date of giving the test, the age of the child, and the like are essential items for interpreting the results. Any specific recommendations resulting from mental testing should be filed. Alterations in procedure or corrective steps taken to help the child make an adjustment must be recorded. To apply corrective means without recording the results is to follow the method of the old-fashioned physician who was unable to tell which pill cured the patient.

The school is striving above all else to provide experiences which will help the child develop. There is a paucity of instruments by which the personal adjustments of the child can be evaluated. Form A is suggested as a type of evaluation which can be made until more refined techniques are developed. Certain desirable qualities which the school seeks to develop have been generalized into adjectives descriptive of personality. A profile rating makes it possible to detect quickly those pupils who have failed to make a satisfactory personal adjustment and those who need help in certain aspects of their adjustment. Each child should be rated at least twice a year. The teacher must not think of the child as "passing" or "failing" in a personality rating; the child is merely on his way to maturity. An evaluation of his status should help the teacher direct the subsequent activities of the child.

Public schools have given little attention to the problem of admission except to determine whether the child is legally old enough to enter school. If the school must take all who come, why be concerned about the child's abilities? Administrators need to be con-

cerned because each new situation means some type of adjustment on the part of the child. The time has arrived when the school should know more than the date of the child's birth and his legal residence. Form B is suggested for use in obtaining desirable facts about entering pupils. This form has been made flexible enough to serve both beginning and transfer pupils. Some of the items may appear to have little value for administrative purposes, but experience has shown that the picture presented by such information is most serviceable in dealing with pupils. When a problem appears, it can often be corrected in its inception before it runs the gamut from a mere annoyance to a major type of behavior maladjustment. The entrance form seems condensed when compared with the data obtained by many experimental schools. The writers admit that certain other items should be included if the motive for record-taking were chiefly research; but a service program such as that found in most public schools seeks completeness without cumbrousness, utility without embellishment.

School people are well aware of the importance of physical condition and its influence on learning. The most progressive schools are insisting on annual physical examinations for every child. It is anticipated that this movement toward better health conditions among public-school pupils is only in its infancy. Provisions should therefore be made for a cumulative health record and the report of an annual physical examination. Forms C and D are suggested to meet these needs. In addition to the record of the annual physical examinations, the health folder should contain a record of all illnesses, descriptions of accidents, vaccination certificate, readmissions to school after illnesses or quarantines, health recommendations of the physician and the physical-education instructor, descriptions of corrective procedures being employed with the child, and any other observations made concerning the child's physical condition. Until the school sees fit to employ its own physician, health information called for in the records should be supplied at least once each year by the family physician. Provisions could be made to have these examinations immediately before the opening of school in the autumn. Physical examinations often reveal that certain pupils are in much worse physical condition after the summer vacation than

FORM A

An Evaluation of Personality

School..... Pupil.....

Rated by..... Grade.....Age.....Date.....

Directions.—Certain adjectives descriptive of personality have been listed on the following pages. The items selected significantly affect a pupil's achievement and adjustment to life. Qualities primarily intellectual and symptomatic of school achievement have been omitted since these characteristics can be measured by the regular intelligence and achievement tests.

Ways in which these personal characteristics may be exhibited have been listed under each item. Study the trait actions until you feel sure of the quality which you are rating. Indicate your evaluations in the space provided in the left margin. If, for example, the child to be evaluated is only average in *accuracy*, indicate your rating by a zero ("0"). If he is better than average but not outstanding, put a plus 1 in the margin. If he is one of the most accurate pupils and quite commendable for his accuracy, place a "+2" in the margin. If the child is below average but not dangerously low, indicate your rating by a "−1." Very low and dangerously lacking in a quality should be indicated by a "−2." The ratings are as follows: "2," outstanding and commendable; "1," above average but not outstanding; "0," average; "−1," below average but not dangerously low; "−2," dangerously lacking in a quality, implying that remedial effort should be initiated at once. Comment on any characteristics about which you are uncertain.

Transfer your evaluations to the profile chart. The algebraic sum of the ratings equals the score.

	Profile				
	−2	−1	0	1	2
Accurate					
Adaptable					
Alert					
Calm					
Cheerful					
Considerate					
Courageous					
Energetic					
Independent					
Neat					
Obedient					
Original					
Persistent					
Prompt					
Sincere					
Stable					
Sociable					
Tactful					
Thrifty					
Versatile					

Score.....

Analysis:

FORM A—*Continued*

Rating

..... 1. *Accurate.*—(*a*) Conforms exactly to accepted standards. (*b*) Produces work which is free from errors and defects. (*c*) Is particular, exacting, and precise.

..... 2. *Adaptable.*—(*a*) Changes readily from one task to another. (*b*) Adjusts easily to unfamiliar situations. (*c*) Complies with the wishes of the group.

..... 3. *Alert.*—(*a*) Responds readily to questions and requests. (*b*) Is watchful and vigilant. (*c*) Exhibits curiosity.

..... 4. *Calm.*—(*a*) Works with composure and coolness. (*b*) Disregards slight distractions. (*c*) Is undisturbed by ordinary emotional situations. (*d*) Works co-operatively with a minimum of friction.

..... 5. *Cheerful.*—(*a*) Is pleasant toward associates. (*b*) Is contented with school work. (*c*) Is optimistic and happy; displays good spirit.

..... 6. *Considerate.*—(*a*) Knows and uses social courtesies. (*b*) Is careful of rights, feelings, and claims of others. (*c*) Is regardful of consequences and circumstances. (*d*) Waits his turn in class and in play.

..... 7. *Courageous.*—(*a*) Is willing to undertake difficult tasks. (*b*) Stands up bravely for his rights. (*c*) Shows gallantry in protecting the rights of others.

..... 8. *Energetic.*—(*a*) Works with force and vigor. (*b*) Is full of life. (*c*) Keeps actively engaged at some task.

..... 9. *Independent.*—(*a*) Obtains necessary materials for himself. (*b*) Detects and corrects his own errors. (*c*) Relies on himself rather than on others.

..... 10. *Neat.*—(*a*) Keeps himself clean. (*b*) Keeps clothing tidy, orderly, and simple. (*c*) Assists in keeping room tidy. (*d*) Keeps materials clean and orderly. (*e*) Prepares work skilfully, clearly, and systematically.

..... 11. *Obedient.*—(*a*) Obeys willingly school regulations. (*b*) Submits to rules made by the group. (*c*) Performs duties falling upon him.

..... 12. *Original.*—(*a*) Does his own thinking. (*b*) Works his own problems and exercises. (*c*) Is creative in thought and action. (*d*) Makes novel and practical suggestions.

..... 13. *Persistent.*—(*a*) Stays by a task until it is completed. (*b*) Works in spite of physical and environmental handicaps. (*c*) Strives for solutions when others have become discouraged.

..... 14. *Prompt.*—(*a*) Is on time for school and class duties. (*b*) Begins work without delay. (*c*) Responds quickly and instantly to incidental demands. (*d*) Keeps appointments.

..... 15. *Sincere.*—(*a*) Avoids false pretense. (*b*) Is strictly honest. (*c*) Is morally blameless. (*d*) Faces issues squarely and frankly.

..... 16. *Stable.*—(*a*) Is dependable in difficult situations. (*b*) Sticks to his major purposes or goals. (*c*) Possesses poise and equilibrium.

..... 17. *Sociable.*—(*a*) Enjoys being in a crowd. (*b*) Is inclined to seek companionship. (*c*) Engages readily in informal conversation. (*d*) Is friendly to all without regard to class or distinction.

..... 18. *Tactful.*—(*a*) Knows what should be done. (*b*) Possesses sensitive perceptive ability. (*c*) Can deal with others without giving offense.

..... 19. *Thrifty.*—(*a*) Uses materials economically. (*b*) Shows evidence of an economical use of funds. (*c*) Makes good use of time and things.

..... 20. *Versatile.*—(*a*) Shows ability in various types of activity. (*b*) Has an aptitude for new methods and changes in procedure. (*c*) Exhibits diversified interests.

FORM B

Public-School Entrance Form

Family name..... Father..... Mother.....
Child's name..... Birth date..... Sex.....
Home address..... Telephone.....
Father's business address..... Telephone.....
When did the child have his last physical examination?.....
Give name of examining physician.....
Is child receiving medical treatment at present?.....
List severe illnesses.....

Check illnesses which child has had:

Infectious diseases:

Chicken pox.....	Measles.....	Pneumonia.....	Tonsillitis.....
Diphtheria.....	German measles....	Poliomyelitis.....	Typhoid.....
Encephalitis.....	Meningitis.....	Scarlet fever.....	Whooping cough.....
Influenza.....	Mumps.....	Smallpox.....	

Other diseases and defects:

Adenoids.....	Diabetes.....	Malaria.....	Sinusitis.....
Appendicitis.....	Epilepsy.....	Mastoiditis.....	Skin disease.....
Asthma.....	Hay fever.....	Nephritis.....	Tuberculosis.....
Bronchitis.....	Heart disease.....	Otitis media.....	Worms.....
Chorea.....	Hernia.....	Pyelitis.....	.....
Croup.....	Laryngitis.....	Rickets.....	.....

Vaccinations and inoculations (give dates):

Against	Date	Success
.....	.....	.....
.....	.....	.....

Birth condition: Normal..... Full term..... Premature.....
Erupted first tooth at what age?..... Walked alone at what age?.....
Talked at what age? Words..... Sentences.....
Is the child right-handed?..... When was hand preference first observed?.....
Have any difficulties been experienced with reference to the child's:
Eating?..... Sleeping?.....
Does the child have abilities which you would like to have developed?.....
Does the child have habits which you would like to see eliminated?.....
Does the child prefer to play with other children?.....
Does the child read?..... Has he been tutored?.....
Has the child been read to at home?.....
Has he attended: Nursery school?..... Kindergarten?..... Church school?.....
Other schools attended .....
Has the child skipped a grade?..... Repeated a grade?.....
What is the birth order of the child?.....
Give sex and birth dates of other children in family.....
.....
Number of other members in the home: Relatives.....
Nurse or governess..... Servants..... Others.....
Father: Age..... Occupation..... Education.....
Mother: Age..... Occupation..... Education.....
Nationality or race.....
Status of parents: Living together..... Separated.....
Divorced..... Father dead..... Mother dead.....

FORM B—*Continued*

Stepparent: Father..... Mother.....

Language spoken in the home.....

Disciplinary methods employed in the home.....

.....

Remarks.....

.....

FORM C

Public-School Physical Examination

Pupil..... Birth date.....

School year													
Date													
Age	4	5	6	7	8	9	10	11	12	13	14	15	16
Height													
Weight													
Teeth: Condition													
Hygiene													
Muscular: Tone													
Co-ordination													
Posture													
Nutrition													
Vision: Right eye													
Left eye													
Are glasses satisfactory?													
Hearing													
Heart: Pulse rate													
Blood pressure													
Auscultation													
Lungs													
Nose													
Throat													
Speech													
Skin: Condition													
Hygiene													

FORM D

NOTES AND RECOMMENDATIONS—ANNUAL PHYSICAL EXAMINATION

Illnesses (name and date) since last examination.....	Recommendations: (date and signature of the physician).....
.....	.....
Severe illnesses or operations:	.....
.....	.....
.....	.....
Vaccinations and immunizations (name and date):.....	.....
.....	.....
Abnormalities:.....	.....
.....	.....
	Examining physician.....

they were when they left school in June. The children's health must be protected, and the school is in no position to deal with the physical needs of pupils when symptoms must be observed only through the eyes of teachers. The physical examination should soon become one of the essentials in the school program.

The first division in Figure 1, "Correspondence and Conferences," is to some extent the miscellaneous part of the folder. The word "miscellaneous" has been avoided purposely. Miscellaneous records and the miscellaneous recording of facts are in no sense substitutes for a genuine attempt to keep data systematically. Most administrators have learned through experience to put into writing as much as possible. Any action with reference to the child should be recorded. Discipline practices, tardinesses, and absences should be noted. These items have been included under Division C in the folder because an absence or a tardiness is an occasion for a conference either with the pupil or with the pupil and parent. Any correspondence concerning the child must be in duplicate so that a copy may be filed to protect the school if the matter should come up at a later date. A record should be made of conferences whether lengthy or brief, formal or informal. Any confidential reports made by teachers need to be preserved. These items are not kept to be used against the child but rather to insure that the child receives just and fair consideration. The vocational interests and aptitudes of the child

should be noted and recorded as they emerge. Such facts serve as valuable materials for educational counseling both with the pupil and with his parents. The school is in a better position than the parents to view the child's career impersonally.

Some schools have found it convenient to keep a running account of the child's behavior in what Olson[1] has called a "Behavior Journal." Such a summary record could include: absences, conferences, date of correspondence, outstanding behavior incidents, disciplinary problems, and the like. Notations should be made of the item or incident, date, findings, decisions, recommendations, and actions. A running account such as that provided by a journal or behavior log serves to keep events in sequence as well as to give direct evidence of the frequency of occurrence of specific behavior patterns. The journal or log is suggested here as a summary device for the items under "Conferences and Correspondence." The summary sheet becomes a ready reference to the more detailed information.

Most elementary schools are using some type of record card even though it is nothing more than a simple card showing marks. Various types of cards have been studied, and some have been tried patiently by administrators who hoped to find an answer to their records problem. There are several defects in the cumulative cards most commonly used. The major defect is that the summary card is too frequently used as the sole school record. All records become in those instances merely a system of shorthand symbols. Such symbols are difficult to use after the passing of five or ten years. Many schools have tried to use a cumulative card which was also intended to serve as an individual folder. There are two serious objections to this device. First, it is printed on both sides and is quickly soiled and easily torn. Second, it is neither large enough nor strong enough to serve as a pupil folder when a real attempt is made to assemble sufficient evidence to give an understanding of the child. Some schools have tried the system of using a separate card for each type of record: physical, mental, scholastic, and the like. Such a system has merits for research workers who may be specializing in certain aspects of development, but the separate-card system is likely to put

[1] The Elementary School of the University of Michigan uses printed forms for their "Behavior Journal."

the data in so many places that it is difficult to deal with the child as an integrated person.

A condensed card is suggested for administrative purposes. The administrative card is not intended to replace the cumulative records in the individual folders. Forms E and F show the face and the

FORM E

FACE OF SUMMARY CARD USED FOR ADMINISTRATIVE PURPOSES

	Age													Date of Conferences
	4	5	6	7	8	9	10	11	12	13	14	15	16	
Achievement:														
Reading														
Arithmetic														
History														
Geography														
Science														
Language														
Health														
Spelling														
Writing														
Music														
Art														
E.A.														Teacher / Home Room
I.Q.														
Personality														
Grade														

Name	Birth Date	C	H	A	M	P	S	Index No.

reverse sides, respectively, of the proposed administrative card. This form should be approximately five inches by eight inches. A four-by-six inch card can be used, but the larger size provides needed space. These summary cards should be filed in such a manner that they will always be at hand for administrative use. The visible file or a visible-binder system makes the records most usable. For small schools, enrolling 100–150 pupils, the visible file of the flat-book type is the most convenient. It takes little space and can be put into the safe at night. Large schools would have to use the drawer-cabinet visible system or a visible binder. The binder system is a little more

convenient to protect against fire losses but is somewhat less serviceable for everyday use. Some of the recent loose-leaf binders have shifting features which make it easy to remove, add, or change a sheet. The visible files of the flat-book or the cabinet type have an advantage if it is desired to use signal clips.

FORM F

REVERSE OF SUMMARY CARD USED FOR ADMINISTRATIVE PURPOSES

Parents Address Telephone

Father's Vocation..... Business Address.....

Date entered..... Grade..... From.....School
Date withdrawn..... Graduated..... Transferred to.....School
Special abilities and interests.....
.....
.....
Extra-curriculum and recreational activities.....
.....
.....
.....
.....
Chums.....
Birth order..... Siblings: Number of..... Number in school.....
Notes.....
.....
.....
Pubertal development: Early..... Average..... Late.....
Vocational interests.....

It will be observed on Form E that the code letters representing the divisions in the pupil folder have been given. These code letters are provided so that signals can be attached to warn the administrator of either desirable or undesirable facts concerning any aspect of the child's development. Each administrator will of course work out his own system of signals, which in no way affects the original data in the folders. The shorthand symbols are not used instead of original data; they merely serve as a summary device. Blue might indicate desirable qualities, while red could be used as a danger signal. Permanent qualities, such as physical malformation or mental deficiency, could be indicated by a red dot in permanent ink. Space has been provided to record the dates of conferences so that the prin-

cipal can easily detect whether there are likely to be pertinent materials in the folder when a problem arises. Pupil, parent, and teacher conferences could be indicated in different colored inks if the administrator so desired. The index number would be recorded permanently, while the name of the teacher and the home-room number would be penciled in and erased as occasion demanded.

Subject achievement should be indicated according to the practice used in the particular school system. Some administrators prefer to use the summary card for results obtained with standardized achievement tests. Others find it more serviceable to record the ranks in class or the percentile ratings.

Form F provides space for pertinent data which may be needed for conferences with parents, teachers, or the child. These summary facts serve as memory ticklers for the administrator. They may save much time in getting at the heart of a problem or serve as a starting point for further investigation.

The forms presented are offered merely as suggestions to administrators who may be trying to evolve satisfactory systems of records. Most of the materials have been developed with a particular school in mind. Some revisions and modifications have been made after trying the several forms. Certain items have been added for the sake of completeness rather than for the purpose of meeting the needs of the particular school for which they were drafted. It is the conviction of the writers that a record system must be developed rather than adopted if efficiency, utility, and satisfaction are to be insured in a given school situation. If a few schools are stimulated to rethink the problems involved in recording pertinent facts concerning developing children, then the purpose of this article will be achieved.

AN INVESTIGATION OF THE LENGTH OF THE ELEMENTARY-SCHOOL DAY

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In January, 1937, a questionnaire was sent to the superintendents of schools of one hundred cities in the Middle West and to the directors of the training schools of the five Missouri State Teachers' Colleges and of the School of Education of the University of Missouri. The persons addressed were requested to furnish information on the length of the elementary-school day, "elementary school" being defined as the kindergarten and Grades I–VI, inclusive. Fifteen cities were selected from Missouri. The other eighty-five cities were selected from nearby states. The list was limited to cities employing from 100 to 450 teachers.

The correspondents were asked to indicate the opening hour of the morning session and of the afternoon session and the closing hour of the morning session and of the afternoon session for each of the grades covered by the report. The questionnaire also asked for the scheduled time and the duration of the regular recesses.

Replies were received from eighty-three schools. Three were rejected because the data were insufficient to permit accurate tabulation. The data presented in this article were derived from the reports of seventy-five school systems and five training schools. In two instances school systems having diversified schedules within the city made reports for each elementary school in the system. The investigator arbitrarily selected the most typical program and tabulated the data for that particular elementary school as representative of that city.

As a means of reducing the number of classifications in the tabulation, time schedules were reduced to the nearest quarter-hour. For example, a dismissal reported at 3:10 or 3:20 was tabulated as 3:15, or a dismissal reported at 3:25 or 3:35 was tabulated as 3:30. While

a number of such variations appear within the data studied, their distribution is such that the net effect on the summary is negligible.

According to Table 1, the majority of schools begin the day at nine o'clock. Second in frequency is 8:45. Eleven schools begin the day at 8:30. One training school begins its day for all grades at eight o'clock, while a second begins its day for Grades IV, V, and VI at that hour. It is presumed that the necessity of correlating the training-school program with the college program of practice teachers makes such a schedule mandatory. While Table 1 does not reveal the fact, the original data indicate that practically always the opening hour is the same for all grades in a given school.

More than a majority of the schools close the morning session at twelve o'clock for Grades IV, V, and VI. Almost half the schools report the termination of the third-grade morning session at twelve o'clock. The typical hour for the closing of the first-grade morning session is 11:30, and the modal hour for the second-grade closing is 11:45.

A surprising variation is shown in the hour at which the schools are scheduled to open in the afternoon. In general, all grades within a given school begin at the same hour. The median of the distribution in each grade is found in the 1:15 group.

The wide range in the scheduled hour for closing the afternoon session can be accounted for by variations in the length of the day, in the length of the noon hour, and in the time of opening the morning session. As might be expected, Grade I shows the widest range. Two schools dismiss Grade I at 2:15 P.M., while four schools dismiss this grade at four o'clock. The median for Grade I is found in the 3:15 interval. For Grades II and III the median is found in the 3:30 interval. For Grades IV, V, and VI the median falls within the 3:45 interval.

Table 2 shows clearly the wide variation in sentiment regarding the proper length of the school day for Grades I and II. Three of the eighty school systems report a school day of only three and three-fourths hours for Grade I, while three report a total of six hours for this grade. The median length of the school day for Grade I approximates four and three-fourths hours. For Grades V and VI the

TABLE 1

OPENING AND CLOSING HOURS OF MORNING AND AFTERNOON SESSIONS REPORTED BY EIGHTY SCHOOLS

Hour	Number of Schools						
	Kindergarten	Grade I	Grade II	Grade III	Grade IV	Grade V	Grade VI
Opening of morning session:							
8:00 A.M.	.....	1	1	1	2	2	2
8:15	.....	.....	.....	.....	.....	.....	.....
8:30	7	11	12	12	11	11	11
8:45	8	17	18	18	18	18	18
9:00	37	51	49	49	49	49	49
9:15	.....	.....	.....	.....	.....	.....	.....
9:30	1	.....	.....	.....	.....	.....	.....
Total	53	80	80	80	80	80	80
Closing of morning session:							
10:30 A.M.	1	.....	.....	.....	.....	.....	.....
10:45	.....	.....	.....	.....	.....	.....	.....
11:00	16	4	1	.....	.....	.....	.....
11:15	12	7	3	.....	.....	.....	.....
11:30	14	44	27	11	4	3	3
11:45	3	12	30	32	27	24	23
12:00 M.	7	13	19	37	49	53	54
Total	53	80	80	80	80	80	80
Opening of afternoon session:							
12:45 P.M.	3	4	4	4	4	4	4
1:00	11	28	28	29	28	28	28
1:15	26	36	36	35	36	37	37
1:30	7	12	12	12	12	11	11
Total	47	80	80	80	80	80	80
Closing of afternoon session:							
2:15 P.M.	.....	2	1	.....	.....	.....	.....
2:30	1	3	.....	.....	.....	.....	.....
2:45	.....	1	3	2	1	1	1
3:00	5	16	10	5	4	4	4
3:15	17	22	21	8	6	4	4
3:30	22	29	26	30	26	25	23
3:45	2	3	13	19	25	26	28
4:00	.....	4	6	16	18	20	20
Total	47	80	80	80	80	80	80

median falls within the interval of five and a half hours, with a range of only thirty minutes in either direction.

TABLE 2

LENGTH OF SCHOOL DAY, INCLUDING RECESS PERIODS, IN GRADES I–VI REPORTED BY EIGHTY SCHOOLS

Number of Hours and Minutes	Number of Schools					
	Grade I	Grade II	Grade III	Grade IV	Grade V	Grade VI
3-45	3	1	.....	.....	.....	.....
4-00	4	1	.....	.....	.....	.....
4-15	1	1	.....	.....	.....	.....
4-30	20	9	5	1	.....	.....
4-45	25	12	2	1	.....	.....
5-00	9	20	8	4	6	6
5-15	6	18	16	14	11	11
5-30	3	9	29	37	37	36
5-45	6	6	14	16	17	18
6-00	3	3	6	7	9	9
Total	80	80	80	80	80	80

TABLE 3

LENGTH OF KINDERGARTEN SESSIONS REPORTED BY EIGHTY SCHOOLS

Number of Hours and Minutes	Number of Schools	
	Forenoon Sessions	Afternoon Sessions
1-45	.....	6
2-00	9	16
2-15	10	17
2-30	24	5
2-45	3	1
3-00	5	.....
3-15	2	2

While the data do not specifically indicate half-day sessions for the kindergarten, it is assumed that two separate groups of pupils are being served in all cases where kindergartens are reported in both morning and afternoon. The length of the kindergarten session is shown in Table 3.

Most schools reporting have a single morning and a single afternoon recess of fifteen minutes' duration. A few school systems having a six-hour day provide for two recess periods in each half-day session. The recess schedules vary so widely that no adequate tabulation seems possible. Comments added to the questionnaire, as well as information contained within the reports, indicate that in a high percentage of the cases the recess periods are staggered so that children of different grades are on the playground at different hours. Several school systems operate on the platoon basis and, as a part of the platoon practice, make provision for a recreation period which the formal school provides in the traditional recess.

On the basis of the data analyzed, in the eighty school organizations under consideration the typical school day is as follows: The morning session opens at nine o'clock in all grades. The morning session closes at 11:15 A.M. in the kindergarten, at 11:30 in Grade I, at 11:45 in Grade II, and at twelve o'clock in Grades III–VI, inclusive. The afternoon session opens at 1:15 P.M. in all grades. This session closes at 3:30 P.M. in the kindergarten, at 3:15 in Grade I, at 3:30 in Grades II and III, and at 3:45 in Grades IV–VI, inclusive. The length of the school day is two and one-fourth hours in the kindergarten, four and three-fourths hours in Grade I, five hours in Grade II, and five and one-half hours in Grades III–VI, inclusive.

SELECTED REFERENCES ON TEACHER EDUCATION[1]

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The references included in this bibliography were published between July 1, 1936, and June 30, 1937. These publications discuss significant issues relating to the education of teachers in elementary and secondary schools and in higher institutions. Three criteria were used in selecting from the much larger number of references published those included in this list: (1) objective analyses and statistical accounts of important aspects of teacher education; (2) comprehensive reports in the form of bulletins, yearbooks, and reports of proceedings; (3) materials which are reasonably accessible.

668. AMERICAN ASSOCIATION OF TEACHERS COLLEGES. *Sixteenth Yearbook, 1937*. Oneonta, New York: Charles W. Hunt, Secretary (% State Normal School). Pp. 158.

Presents the proceedings of the 1937 meeting of the association at New Orleans.

669. ANDERSON, EARL W. "Teaching Opportunities in 1936," *Educational Research Bulletin*, XVI (January 13, 1937), 7–10.

Presents data showing the number and the percentage of the graduates of Ohio State University in 1936 who had secured teaching positions in various subjects and fields by January 1, 1937. Compares facts with those for previous years.

670. BENNETT, RAYMOND D. "Should College of Education Seniors Elect Freshmen Courses?" *Educational Administration and Supervision*, XXIII (February, 1937), 127–32.

Presents the results of an analysis of records of 804 students receiving the degree of Bachelor of Science in Education from the Ohio State University.

671. BENT, RUDYARD K., and DOUGLASS, HARL R. "Differences in the Performance of Departmental Groups of Student Teachers on Qualifying

[1] See also Item 88 (Alexander) in the list of selected references appearing in the February, 1937, number of the *School Review*, Item 436 (Tostlebe) in the September, 1937, number of the *Elementary School Journal*, Item 549 (Douglass and Stroud) in the November, 1937, number of the *School Review*, Item 569 (Robinson) in the November, 1937, number of the *Elementary School Journal*, and Item 581 (Heaton and Koopman) in the December, 1937, number of the *School Review*.

Examinations at the University of Minnesota," *School and Society*, XLV (May 22, 1937), 726–27.

Reports information concerning 1,084 students and implications relative to causative factors of failure.

672. BEU, FRANK A. *The Legal Basis for the Administration and Control of the Publicly Supported Normal Schools and Teachers Colleges in the Territory of the North Central Association.* Minneapolis, Minnesota: Burgess Publishing Co., 1937. Pp. iv+164.

Presents the results of an analysis of the laws relating to the organization of public normal schools and teachers' colleges from 1849 through 1933.

673. BEU, FRANK A. "Education Courses in State Teachers Colleges and Liberal Arts Colleges," *Bulletin of the American Association of Collegiate Registrars*, XII (January, 1937), 132–37.

Presents the results of an analysis of courses in education reported in catalogues of 152 state teachers' colleges and 248 liberal-arts colleges and universities.

674. BIXLER, L. E. "A Teacher-Education Program for the Preparation of Elementary Teachers," *A College Looks at Its Program*, pp. 179–89. New Concord, Ohio: Muskingum College, 1937.

States several basic principles underlying the reconstruction of curriculums for elementary-school teachers and the procedures adopted in attacking the problem at Muskingum College.

675. BRIGGS, EUGENE S. "The Demand for Teachers Prepared To Guide and Direct Extra-class Activities," *School and Society*, XLV (May 15, 1937), 693–96.

Summarizes reports from 161 secondary-school principals in 45 states, 100 state teachers' colleges, and 35 teachers' agencies.

676. BRINK, WILLIAM G. "Internship Teaching in the Professional Education of Teachers," *Educational Administration and Supervision*, XXIII (February, 1937), 89–100.

Considers the need and the value of internship teaching and describes the program adopted by Northwestern University and co-operating schools.

677. CAIN, LEO F. "An Evaluation of Teacher Certification in California," *Bulletin of the American Association of Collegiate Registrars*, XII (January, 1937), 123–31.

Describes three general types of credentials and certificates in California, the certification agencies, the historical development of the California plan, and present standards and requirements for certificates.

678. CAMP, CORDELIA. "Some Practices Used in Student-teaching," *Educational Administration and Supervision*, XXIII (January, 1937), 12–20.

Describes certain practices used in the training school at Western Carolina Teachers College (North Carolina) and presents some evaluation of them. In-

cludes reference to the "general plan of organization," "activities at the beginning," "classroom practices related to student teaching," "some methods of giving constructive criticisms," and "aims and procedures in group conferences."

679. CHAMBERS, M. M. "Litigation regarding the Financial Support of State Normal Schools and Teachers Colleges," *Educational Administration and Supervision*, XXII (December, 1936), 693–700.

Discusses issues relating to three sources of support: federal land grants, state appropriations, and local taxation and bonding.

680. CLASS, E. C. "A Plan for Integrating Theory and Practice in the Preparation of Elementary-School Teachers," *Educational Administration and Supervision*, XXIII (March, 1937), 175–83.

Describes the philosophy underlying the plan followed at Ohio University and outlines objectives and detailed procedures.

681. CURTIS, LOUIS WOODSON. "Training the Music Teacher for the School of Today," *California Journal of Elementary Education*, V (August, 1936), 22–27.

Considers "new uses for music," "the ideal music teacher," "preparation of the classroom teacher in field of music," "piano accompaniments," "knowledge of music literature," etc.

682. DAVIS, CALVIN O. "The Administration of Teacher Training," *University of Michigan School of Education Bulletin*, VIII (February, 1937), 67–69.

Considers the question: "Should the responsibility for administering the work in teacher training in a university be vested in all of the faculties collectively or in the faculty of a separate school or college of education?"

683. DEBOER, JOHN J. "A Laboratory Course in Educational Method," *Educational Administration and Supervision*, XXII (September, 1936), 471–76.

Outlines the program of professional courses offered at the Chicago Normal College and describes in detail the purpose, scope, and procedure of a laboratory course in educational method.

684. DEVOE, G. P. "Some Evaluations and Recommendations Pertinent to Certain Curriculum Trends in State Teachers Colleges," *Educational Administration and Supervision*, XXII (September, 1936), 438–46.

Discusses trends in length and academic level of curriculum offerings, in academic and professional training, and in provision for in-service training.

685. DOWLING, P. J. "The Training of Catholic Elementary School Teachers in England," *Catholic Educational Review*, XXXIV (November, 1936), 513–21.

Describes the provisions made in England and Wales for the training of Catholic elementary-school teachers and discusses admission requirements and the curriculums provided.

686. EGGERTSEN, CLAUDE. "Pupil Analysis in Student-teaching," *Educational Administration and Supervision*, XXIII (April, 1937), 263–79.

Supports the thesis that "programs of student teaching should be revised to center about the pupil and not about the student teacher or the subject matter he teaches."

687. ELIASSEN, R. H., and ANDERSON, EARL W. "Investigations of Teacher Supply and Demand Reported in 1936," *Educational Research Bulletin*, XVI (March 17, 1937), 72–74.

Summarizes and interprets the results of eleven studies reported during 1936.

688. EMMERT, ERNEST G. "Teacher Demand and Teacher Turnover in the High Schools of Ohio," *Educational Research Bulletin*, XVI (April 14, 1937), 92–96.

Presents significant findings reported in a series of Masters' theses concerning teaching positions in specific fields for 1932–33.

689. THE FACULTY. "Education of Teachers in Teachers College," *Teachers College Record*, XXXVIII (October, 1936), 1–73.

Includes a brief historical account of the origin, purpose, basic principles, and development of New College of Teachers College, Columbia University, between 1931 and 1935; makes an appraisal of its curriculum content, directed teaching, and selective admission and promotion.

690. FLOWERS, J. G. (Editor). *Supervisors of Student Teaching: Seventeenth Annual Session, New Orleans, Louisiana, February 22 and 23, 1937*. Upper Montclair, New Jersey: J. G. Flowers (% State Teachers College), 1937. Pp. 120.

Includes various articles relating to the central theme of the yearbook: "The Integration of the Laboratory Phases of Teacher Training with Professional and Subject-Matter Courses."

691. FRISTOE, DEWEY. "The Recognition of Individual Differences in Student-teaching," *Educational Administration and Supervision*, XXII (December, 1936), 653–62.

Emphasizes the importance of training student teachers to recognize individual differences in their teaching activities.

692. FULLER, HENRY H. "Directed Student-teaching at the State College of Washington," *Educational Administration and Supervision*, XXIII (February, 1937), 133–42.

Points out the importance of observation and practice teaching under careful guidance and describes the plan of directed student teaching in State College of Washington.

693. GARBER, LEE O. "The Content of Textbooks in Courses in Secondary Education," *School Review*, XLIV (December, 1936), 759–63.

Presents the results of an analysis of the contents of nine textbooks on secondary education.

694. GILDERSLEEVE, VIRGINIA. "And Sadly Teach," *American Scholar*, V (Autumn, 1936), 424–30.

Challenges state boards of education for adopting certification requirements which make it "impossible for graduates of our best liberal-arts colleges to teach in the public schools of this country."

695. HUNT, ERLING M. "Teaching Becomes a Profession," *Teachers College Record*, XXXVIII (March, 1937), 465–76.

Discusses the changing conception of the function of education, the correspondingly increased responsibilities of teachers, and the need for broader training for teaching.

696. JACKSON, REID E. "A Proposed Revision of a Two-Year Curriculum for Training Elementary Teachers in Negro Colleges," *Journal of Negro Education*, V (October, 1936), 602–11.

Criticizes conventional curriculums, urges more active participation in curriculum revision on the part of negroes, and submits a tentative two-year program for training elementary-school teachers.

697. JOINT COMMITTEE OF THE AMERICAN ASSOCIATION OF TEACHERS COLLEGES AND THE AMERICAN LIBRARY ASSOCIATION. *How Shall We Educate Teachers and Librarians for Library Service in the School?* New York: Columbia University Press, 1936. Pp. 74.

Presents an analysis of existing curriculums, a statement of principles which should guide in reorganizing them, and recommendations for a library-science curriculum for teachers and teacher-librarians.

698. JUDD, CHARLES H. "The Education in Liberal-Arts Colleges of Students Preparing To Teach in Public and Private Secondary Schools," *School and Society*, XLV (January 30, 1937), 137–45.

Presents two conflicting views concerning the education of prospective teachers and considers facts which underlie the adoption of a rational attitude toward the problem.

699. JUDD, CHARLES H. "Preparatory and In-service Education of Secondary-School Teachers," *Bulletin of the Department of Secondary-School Principals of the National Education Association*, XXI (March, 1937), 17–28.

Advocates in-service study of issues relating to the reorganization of secondary-school curriculums as a method of promoting a desirable type of scholarship among teachers.

700. KELLEY, VICTOR H. "Integration of Student-teaching and Professional Courses in Education," *Educational Administration and Supervision*, XXII (November, 1936), 625–31.

Submits four proposals for securing a better integration of teaching and professional courses and describes the practice at the Arizona State Teachers College, Flagstaff.

701. KING, A. K. "Current Practices in the Training of Teachers," *High School Journal*, XX (March, 1937), 83–95, 118–19.

Reports the results of a study, among ninety-one institutions that prepare teachers, to determine trends in (1) the control and direction of the programs of prospective teachers, (2) the nature of their academic and professional training, (3) provision of opportunities for observation and apprentice teaching, and (4) other practices related to teacher education.

702. KRINER, HARRY L. "Five-Year Study of Teacher College Admissions," *Educational Administration and Supervision*, XXIII (March, 1937), 192–99.

Reports the findings of a study started in September, 1931, with 260 students to test the ability of college-admission officials to predict teaching success, basing prediction on various factors and procedures.

703. LANTIS, L. O. "Examinations in Teachers Colleges," *School and Society*, XLIV (November 14, 1936), 653–55.

Summarizes the information submitted on questionnaire blanks by institutions in thirty-three states concerning the time and the length of examinations and the extent of use of comprehensive examinations.

704. LAWSON, DOUGLAS E. "Basic Principles Underlying the Administration of Student-teaching," *Educational Administration and Supervision*, XXIII (March, 1937), 235–37.

Identifies four principles that underlie an effective plan for the training of student teachers.

705. LEARNED, WILLIAM S. "Tested Achievement of Prospective Teachers in Pennsylvania," *Thirty-first Annual Report of the Carnegie Foundation for the Advancement of Teaching*, pp. 29–51. New York: Carnegie Foundation for the Advancement of Teaching, 1936.

Compares the achievement of prospective teachers in liberal-arts colleges and schools or departments of education on a battery of tests with that of non-teachers, and considers how better teachers can be secured.

706. LORD, A. R. "A Canadian Looks at Teacher Training," *Elementary School Journal*, XXXVII (January, 1937), 353–64.

Points out virtues and defects in the types of teacher education provided in teachers' colleges in the United States and normal schools in Canada.

707. MCALLISTER, JANE ELLEN. "Educating the Exceptional Teacher at Miner Teachers College," *Educational Administration and Supervision*, XXIII (March, 1937), 225–34.

Describes the opportunities and the guidance provided student teachers in order to secure maximum development.

708. MCCONNELL, ROBERT E. "Recent Trends in the Development of Teacher-training," *Educational Administration and Supervision*, XXII (November, 1936), 594–601.

Traces briefly the development of teacher-training institutions and considers recent expansions and trends with respect to curriculums, professional training, the library, and personnel service.

709. MEYERS, ALONZO F. (Editor). *Problems in Teacher-training*, Vol. XI. Proceedings of the 1936 Spring Conference of the Eastern-States Association of Professional Schools for Teachers. New York: Prentice-Hall, Inc., 1936. Pp. xviii+384.

Includes the papers presented before the following sections: Administrative and Instructional Divisions; faculty members in different departments; student-faculty and student groups.

710. MITCHELL, W. FRASER, and BEAULAVON, GEORGES. *The Training of Teachers*. London: Published in association with the University of London Institute of Education by Evans Bros., Ltd., 1937. Pp. 96.

Discusses the training of teachers in Europe, the United States, and the British Dominions in the period 1920–35.

711. ODENWELLER, ARTHUR LEONARD. *Predicting the Quality of Teaching*. Teachers College Contributions to Education, No. 676. New York: Teachers College, Columbia University, 1936. Pp. xii+158.

Presents the results of a study to determine the relation between certain traits and effectiveness in teaching.

712. OPPENHEIMER, J. J. "Implications of the Public School Curriculum for the Education of Teachers," *Peabody Journal of Education*, XIV (November, 1936), 134–45.

Considers the characteristics of recently developed public-school curriculums and discusses their implications, with special reference to the program of teacher education at the University of Louisville.

713. ORATA, PEDRO T. "The Problem Professor of Education," *Journal of Higher Education*, VIII (March, 1937), 150–58.

Considers the cleavage between educational theory and practice and recommends a thorough revision of teacher-education programs and methods of procedure.

714. PECHSTEIN, L. A. "The Need for Differentiation in the Preparation of Teachers," *School and Society*, XLV (April 17, 1937), 529–35.

Considers the bearing that the scientific facts of psychology and current socio-economic trends should have on the preparation of teachers.

715. PECK, LEIGH. "A Study of the Adjustment Difficulties of a Group of Women Teachers," *Journal of Educational Psychology*, XXVII (September, 1936), 401–16.

Compares the adjustment difficulties of one hundred women teachers, fifty-two women students (not teachers), and twenty-six men (teachers and prospective teachers), as revealed through the use of the Thurstone Personality Schedule, the Otis Self-administering Tests of Mental Ability, and a personal-data sheet.

716. PEIK, W. E., and HURD, A. W. "Curriculum Investigations at the Teacher-training, College, and University Levels," *Review of Educational Research*, VII (April, 1937), 178–84, 226–36.

Summarizes essential findings of more than two hundred curriculum reports classified according to the specific themes to which they related.

717. PEIK, W. E., and HURD, A. W. "The Preparation of Teachers," *Review of Educational Research*, VII (June, 1937), 253–62, 322–34.

Reviews significant findings of more than two hundred investigations under such headings as "Scope of Teacher Training," "Practices and Policies," "Innovations," "Extra-Curriculum," "Graduate Work," "Student Teaching."

718. REINHARDT, EMMA. "Vocational Expectations of Freshmen in a Teachers College," *School and Society*, XLIV (October 17, 1936), 518–20.

Summarizes information secured from 359 Freshmen in 1930 and 271 in 1935 concerning the kind of teaching desired, the professions to which teaching was a steppingstone, etc.

719. *Report of the Committee on Program of Graduate Study Which Institutions of Higher Education Should Organize for the Preparation of Secondary-School Teachers*. Chicago: Association of American Universities, Charles H. Judd, Committee Chairman (% University of Chicago), 1937. Pp. 20.

Presents the report of the association's committee, consisting of Lotus B. Coffman, William J. Robbins, and Charles H. Judd (chairman).

720. ROBINSON, WM. MCKINLEY. *Practices and Trends in the Preparation of Teachers for Rural Elementary Schools in the State Teachers Colleges and Normal Schools*. Kalamazoo, Michigan: Wm. McKinley Robinson (% Western State Teachers College), 1936. Pp. viii+120.

Presents a detailed summary of data, secured at three different periods from 1926 to 1935, concerning practices relating to the preparation of rural teachers, with special reference to differentiation of curriculums.

721. RUGG, EARLE. "Changes Demanded in the Professional Education of Teachers," *Educational Administration and Supervision*, XXII (December, 1936), 671–84.

Summarizes the main trend in curriculum organization at Colorado State College of Education from 1923 to 1933 and suggests "what a faculty of a college can do to apply modern curriculum theory and research."

722. RUSSELL, WILLIAM F. "A New Charter for Teacher Education," *Teachers College Record*, XXXVIII (December, 1936), 181–95.

Reviews current criticisms concerning teacher education, identifies the basic issue involved, considers changing conceptions of three phases of education, and emphasizes the complexity of the problem of educating teachers.

723. SANFORD, CHARLES W. "A Combined Course in Student-teaching and the

Technique of Teaching," *Educational Administration and Supervision*, XXII (November, 1936), 636–40.

Presents the chief reasons for combining these courses in the College of Education, University of Illinois, and the advantages which appear to have resulted.

724. SANGREN, PAUL V. "The Psycho-educational Clinic as an Aid to Teacher-training," *Educational Administration and Supervision*, XXII (October, 1936), 523–27.

Gives a brief history of the establishment of psychological clinics in this country and describes the organization and service rendered by the psycho-educational clinic at Western State Teachers College, Kalamazoo, Michigan.

725. SCHRAMMEL, H. E. "Length of the Employment Year and Sabbatical Leaves of Absence in Teachers Colleges," *School and Society*, XLV (March 27, 1937), 454–56.

Summarizes responses from twenty-seven teachers' colleges concerning length of service required for which yearly salary is paid and concerning prevailing practices for sabbatical leaves of absence.

726. SMITH, MARGARET RUTH. *Student Aid*. Teachers College Contributions to Education, No. 704. New York: Teachers College, Columbia University, 1937. Pp. vi+152.

Presents the results of a study to determine "the bases of selection of students to whom loans, scholarships, and fellowships were awarded in a graduate school of education, and to evaluate these bases of selection by means of certain criteria."

727. SMITH, PAYSON. "Some Current Issues in Teacher Education," *Educational Record*, XVII (July, 1936), 428–40.

Discusses issues relating to the education of teachers in fields that lie outside teaching, to the education of elementary teachers, and to the education of secondary teachers.

728. STUMP, N. FRANKLIN. "A Liberal Arts College Follow-up Service for Teachers," *Educational Administration and Supervision*, XXII (December, 1936), 685–92.

Describes the nature of the follow-up service provided at Keuka College, Keuka Park, New York, and indicates, as a result of a four-year study, the major teaching problems which the graduates of that institution face.

729. "Teacher Education: A Committee Report," *Curriculum Journal*, VIII (May, 1937), 185–219.

Comprises a series of articles by experts on such subjects as "The Function of Goals in Teacher Education," "The Personal Growth of Secondary School Teachers," "Neglected Areas in the Education of Teachers."

730. ULLRICH, FRED T. "Health Service in Teachers Colleges," *Educational Administration and Supervision*, XXIII (January, 1937), 68–75.

Summarizes information from seventy-three teacher-training institutions concerning policies, staff, and practices relating to their health service.

731. UMSTATTD, J. G. "Improved Opportunities for Teacher-Education Graduates," *Educational Administration and Supervision*, XXII (November, 1936), 619–24.

Summarizes the results of nation-wide studies of the supply and the demand of graduates of teacher-education curriculums for 1933–34 and 1934–35.

732. *The Use of Background in the Interpretation of Educational Issues*. Yearbook XXV of the National Society of College Teachers of Education. Chicago: University of Chicago Press, 1937. Pp. 256.

Presents the results of a survey of various fields of scholarship "to select from these departments of knowledge seminal ideas and distinctive insights, and to indicate the bearing of these upon educational issues."

733. VAN PATTER, V. E. "The Individual Conference as a Technique in the Conduct of Student-teaching," *Educational Administration and Supervision*, XXIII (February, 1937), 121–26.

Summarizes reports from forty-four state teachers' colleges in twenty-two states concerning the relative use of group and of individual conferences, the frequency and length of conference, and the extent to which such conferences are recognized in determining the supervisory load.

734. VAN PATTER, V. E. "Teacher Personality—What Can We Do about It as a Part of Institutional Teacher-training?" *Educational Method*, XVI (April, 1937), 339–42.

Emphasizes the importance of personality development, describes a plan for the development of personality in connection with practice teaching, and presents evidence concerning the effectiveness of such training.

735. WASHBURNE, JOHN N. "Developing a Curriculum for Teacher Education," *Progressive Education*, XIV (May, 1937), 356–63.

Discusses the essential features of a curriculum for teacher training in the light of four fundamental requirements of progressive education.

736. WILLIAMSON, OBED JALMAR. *Provisions for General Theory Courses in the Professional Education of Teachers*. Teachers College Contributions to Education, No. 684. New York: Teachers College, Columbia University, 1936. Pp. vi+186.

Considers the origin, development, and present status of courses in general educational theory; discusses the qualifications and philosophies of teachers of theory courses; and offers suggestions concerning the function, content, and teaching of such courses.

737. WOODY, CLIFFORD. "Implications for Teacher-training of the Survey of Curriculum Development in Michigan," *Educational Administration and Supervision*, XXIII (March, 1937), 213–21.

Summarizes significant findings of a survey made under the direction of the School of Education of the University of Michigan, and points out implications for teacher education.

Educational Writings

REVIEWS AND BOOK NOTES

The bases of current educational practice.—Books written for the use of prospective teachers should be clear, inclusive, and unbiased. In formulating a textbook "for the culminating education course in teacher training" (p. ix), Thomas and Lang[1] have evidently attempted to present a well-balanced picture of the educational scene. Contributions of the varying schools of thought are recognized and fairly appraised. Yet the book is something more than a scrapbook compiled from educational controversies: there is a definite development of the theme that marches logically up carefully chosen steps toward an understanding of the current situation in American schools. For their fairness in treating controversial issues and for their logical development, the authors are to be congratulated.

As a first step the authors chose to discuss the philosophy of education. The amount of space devoted to this subject would have seemed strange a few years ago. So, also, would the use of philosophy as the foundation for a study of educational principles. Nevertheless, the authors present a cogent argument for the necessity of an understanding of basic facts, the selection of objectives, and the evaluation "of essential principles and practices with a view to their organization . . . . into a scheme of educational procedure" (p. 7). The need for each teacher to formulate his own philosophy is stressed. "The absence of any well-considered philosophy makes one either a mechanical follower of routine or the victim of ill-advised and futile innovations" (p. 16). However, a warning against dogmatism is expressed in this sentence: "The last word in education has not yet and never will be uttered by any group" (p. 59).

The authors then take up the bases of education, which they find to be biological, psychological, sociological, and historical. One wonders why anthropology, with its brilliant studies in the origin and the development of human culture, should not find a place in such a list. Most writers on education seem blind to the light thrown on the nature of our civilization by such scholars as Wissler and Lowie. Surely the discrediting of the "culture-epochs" theory does not render anthropology less valuable for a due comprehension of human progress, whether of the race or of the individual.

[1] Frank W. Thomas and Albert R. Lang, *Principles of Modern Education.* Boston: Houghton Mifflin Co., 1937. Pp. xvi+340. $2.25.

From the bases of education the authors proceed to describe the American educational practice. Discussion of this chaotic scene is temperate, and the authors have maintained their eclectic attitude in their effort to guide the reader to intelligent views on the claims and the counterclaims of the leading protagonists. This procedure makes the book unlike many recent educational writings, which adhere strictly to the views of one author or school of thought, calmly assuming the argument set forth to be unanswerable. The authors of *Principles of Modern Education* leave the reader with the combined impressions of much confusion of educational thought, considerable progress, and great opportunities for the future of the teaching profession. This outlook is a sound and helpful attitude for the prospective teacher to acquire.

One might criticize the chapter on "The Teacher" in that it sets up an improbable ideal of perfection—an ideal unlikely soon to be reached if we are to accept the results of the Learned study of students in training for teaching in Pennsylvania. Likewise, it seems that there is in this book some failure to appreciate one of the causes of confusion in school practice, namely, the proposals for educational reorganization, which have succeeded each other in popularity so rapidly that none has had an honest trial.

The "Topics for Discussion" and "Exercises for Study and Discussion" which accompany each chapter are interesting and provide thought-provoking materials for study. This feature of the book is especially to be commended.

Taken altogether, the authors have presented an intricate and a difficult field with admirable simplicity of statement. This volume should prove to be a useful guide for the students to whom the authors profess to address their book.

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Education and social change.—The past decade has brought increasing awareness of the differential rates of change among various aspects of society and of the consequent difficulties in maintaining social equilibrium. Writings, speeches, and other publicity reflect this awareness, often in efforts to retard change at certain points or to speed it up at others. Attention has been called to the lag of schools in making adjustments for training children, and it has been thought that a better understanding by lay and school people of the implications of recent cultural changes should stimulate schools to function more fruitfully. Hence the timeliness of a publication[1] which attempts to sketch major trends of social change and to orient readers concerning their educational significance.

After an introductory chapter, the materials are grouped into eleven chapters, each considering a social trend. The chapter titles, rather long perhaps, adequately indicate chapter contents: "The Widening Gap between Our Wants and

[1] Raleigh Schorling and Howard Y. McClusky, *Education and Social Trends*. Yonkers-on-Hudson, New York: World Book Co., 1936. Pp. vi+154. $1.32.

Our Ability To Satisfy Them," "The Increasing Concentration of Economic Control without a Corresponding Acceptance of Social Responsibility," "The Weakening of Controls for the Integration of the Child's Personality Exercised by Religion and the Home," "The Increasing Complexity and Strain of Modern Life to Which the Individual Must Adjust," "Shifting Character of the Population," "The Struggle for International Co-operation," "The Clash of World Political Ideas with Its Implied Threat to American Democracy," "The Influence of the Machine and Scientific Techniques on the Number and Types of Occupations," "The Widening Gap between the Expert and the Masses," "The Growing Conviction of the Masses regarding Desirability of Education," and "The Discovery of the Public School by Numerous Pressure Groups as an Instrument for the Control of the Ideas of Children." A two-page index is included.

Each chapter, with supporting evidence, sketches the nature of the trend discussed, points out educational implications, lists issues for group discussion, and concludes with a list of "minimum" and "optional" readings. No attempt is made to present original research; the plan has been to draw on extensive and systematic analyses appearing in the literature and to orient these with reference to the educational implications of the trends considered.

The language is decidedly nontechnical; the materials are organized in terms of significant trends; and the implications pointed out are important. Although alert educators interested in social trends will find much familiar material and may take issue with certain rather dogmatic statements, the style used might profitably suggest to them that simple language may be used in treating other than simple issues. For most school people and for interested laymen the book should offer a valuable introduction to major social trends and should stimulate thinking about the bearing of these trends on education.

HAROLD H. PUNKE

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Beginning school subjects, an integral part of activities.—Many recent publications dealing with curriculums and teaching procedures in the lower school emphasize "enriched programs of activities" but tend to eliminate discussion of any systematic teaching of school subjects. As a result, many teachers, experiencing through "social studies," "creative activities," and "dramatic play" their first liberation from traditional primary-school routine and dull drill, have practically abandoned any systematic program of teaching school subjects. While the improvement in learning and in the general development of young children are as apparent as were the limitations of the preceding period, leaders in this educational field are challenging the position taken by the extremists. The more sane, middle-of-the-road position is evidenced by Ruby Minor,[1] director of kindergartens and elementary education in Berkeley, California.

[1] Ruby Minor, *Early Childhood Education: Its Principles and Practices*. New York: D. Appleton-Century Co., Inc., 1937. Pp. xx+764. $3.00.

The author states in the Preface:

It is not the purpose of this book to detract from the influence of child-centered schools which have done so much to release the school situation from the domination of a prescribed regime and the deadliness of school subjects when they were emphasized as such. It is written, rather, with the hope of clarifying some of the misconceptions . . . . as to the usefulness of the school subjects in realizing the newer values . . . . in an activity or experiential program [p. vii].

The author treats comprehensively problems of kindergarten-primary and, less intensively, the problems of nursery schools. The material of the book divides itself into four parts. Part I discusses general aspects: historical background; philosophical principles; educational objectives; and the nature of, and method of dealing with, individual differences. Part II analyzes certain aspects of learning, with emphasis on purposeful participation in meaningful situations and experience as the basis for development. Part III, which comprises the major portion of the book, deals with school subjects and teaching techniques in a modern school. One chapter is devoted to each of the following topics: health and physical education, social studies, nature-study and science, English, reading, literature and dramatization, handwriting and spelling, number concepts, art, and music. Part IV presents three chapters on teachers' personal and professional qualifications, school records and reports, and equipment and supplies.

Following each of the twenty-one chapters of the book are several pages of selected references and a series of exercises and problems related to the discussion in preceding chapters.

The first two parts of the book give a concise summary useful to those familiar with problems of unification in kindergarten and primary education. The inclusion, however, of copious excerpts from secondary sources tends to leave the inexperienced teacher or college student in a state of mental indigestion, ill prepared to interpret the application of psychological and philosophical principles, succinctly summarized.

In Part III the author carries out the purpose stated in the Preface and develops, in ten chapters, systematic teaching of school subjects through children's day-by-day experiencing. Though each chapter discusses problems peculiar to a particular school subject, the general treatment follows that given in the chapter on "Enrichment of Experience through Reading." The author discusses reading readiness as promoted by enriching experiences, methods of beginning instruction, objectives in early grades, importance of oral and silent reading, units of reading, selection of material, literary appreciation, independent deskwork, the place of phonics, diagnosis of individual differences, and remedial guidance. In the treatment of the various aspects the author reports and uses findings of scientific studies and illustrations from classroom practices.

Each chapter reflects painstaking research and an unusual breadth of experience that have been well synthesized in the development of the main purpose of the book. Any extensive overview of current practices in early childhood edu-

cation is subject to minor criticisms. For example, the statement, "Many young children will show no interest in the woodworking material" (p. 567), ignores the high ranking given tools and wood in studies of children's preferences in selection of material. Further, certain procedures advocated for kindergarten levels in art, music, dramatization, and games are questionable though entirely appropriate for Grades II and III. The meager discussion of dramatic play, the suggestions for miniature villages in sand tables, the formal dramatization, and the lack of mention of playground equipment conducive to dramatic play constitute significant imperfections. With the increasing emphasis on the parent-teacher-child relation, it is surprising to find only two brief paragraphs on this topic. Generalizations are given here and there for which no substantiating evidence is cited, as, "Among the smaller blocks, the Hennessey and the Sta-built are the most used" (p. 704).

The book nevertheless represents the most comprehensive treatment of the whole field of early childhood education that has been published to date. Its scope, organization, practical classroom point of view, and its interpretation of significant and pertinent literature of the field make it a valuable textbook for teacher-training classes, as well as a guide for the experienced teacher.

KATHERINE L. MCLAUGHLIN
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Principles of learning experimentally applied in the classroom.—Principles of learning which are derived from the results of experiments performed under laboratory conditions are frequently assumed to be effective also in the usual schoolroom situation. This assumption, however, should be tested by means of appropriate experimental investigations. The monograph under review reports a study of this type.[1]

The investigation attempted to determine the effectiveness under ordinary classroom conditions of three principles of learning:

1. Other things being equal, a combination of reading and recitation during the course of the learning process is more effective than mere re-reading throughout the learning period.

2. Other things being equal, reward in general increases the rate and amount of learning.

3. Other things being equal, an immediate knowledge of results is more beneficial to learning than a delayed knowledge of results [p. 4].

The study included twelve experiments using a variety of learning methods and of learning materials, the latter consisting of nonsense syllables, spellings of words, arithmetical facts, and English vocabulary. Almost two thousand pupils in six public schools of New York City, including bright, dull, and normal

[1] George Forlano, *School Learning with Various Methods of Practice and Rewards.* Teachers College Contributions to Education, No. 688. New York: Teachers College, Columbia University, 1936. Pp. 114. $1.60.

classes from Grade IV through Grade VIII, were used as subjects. Although the experiments were conducted with children working in their classrooms, the conditions were carefully controlled and the methods and materials were rotated in every possible order.

The experiments on the principle of recitation versus re-reading showed that practicing recall of materials after reading them a certain number of times was much more valuable in learning than was additional reading. The optimum combination of recitation and reading differed somewhat with the type of material learned and with the method used in testing learning, but the recitation method proved to be superior when the time devoted to recall ranged from as little as 20 per cent to as high as 80 per cent of the total learning time.

In the experiments on the principle of rewarding successful learning, from one to five pennies, of a total of five pennies placed on the pupil's desk when the learning began, were either awarded to the pupil shortly after the test or were promised to him at that time and awarded later. Both types of reward gave results superior to methods involving no reward although in some cases the superiority was either slight or of doubtful statistical significance.

The method of learning in which pupils were given a knowledge of their results immediately after studying a word or a fact in a list of several such items was found to be less efficient than learning in which knowledge of results was delayed for a few minutes until the study of the entire list was completed. In some cases, however, the superiority was either small or did not approach statistical certainty.

This investigation was carefully conducted and is significant (1) because it reveals the value of certain principles of learning when applied under ordinary classroom conditions and (2) because it shows how some of these principles may be adapted for such practical use. It should lead to similar study of many other principles of learning.

EDWARD F. POTTHOFF

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A world-survey of the common schools in eighty-two pages.—Students of education are seeking perspective. Educational commissions and teachers traveling independently are visiting distant lands to find out what is being done in the promotion of the public schools. Universities are introducing courses in comparative education. The United States Office of Education reports an increasing demand for information relating to the schools in foreign countries. Among those who have observed conditions abroad is Professor William C. Bagley, who in his lecture before the Kappa Delta Pi society outlined the spread of the common school throughout the world during the past century.[1]

Many, unacquainted with the data of this field, will welcome Professor Bagley's brief survey as an introduction to the subject. Confined to the limits of a

[1] William C. Bagley, *A Century of the Universal School.* Kappa Delta Pi Lecture Series. New York: Macmillan Co., 1937. Pp. xvi+86. $1.00.

lecture, the essay is lacking in the details necessary to a thorough study. The lecturer begins with a retrospective glance at developments in the United States, Japan, and European countries, and then presents a series of brief sketches, each devoted to the situation in a foreign country, such as the Soviet Union, Turkey, Mexico, China, Iraq, and Java.

Professor Bagley concludes that during the past century universal education has won world-recognition. The picture is not bright in some countries, it is true, but beginnings are being made. So far as the United States is concerned, he notes that in many states and cities the universal school has come to embrace secondary education.

The lecturer finally asks what it all amounts to. He is unable to cite positive evidence that popular education has improved government, promoted peace, or diminished crime; yet he is firm in his faith that the effort has not been wasted.

STUART G. NOBLE

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The history of a struggle for school control.—One of the most interesting phases of the history of education in many states is the evolution of the struggle for school control. This evolution frequently represents a severe conflict between the forces favoring centralized control and the forces favoring local liberty and decentralization in the control of school matters. The historical evidence presented in a study of the development of local school control in the state of New York[1] shows that this conflict was not only present but persistent in that state.

The author begins by dealing with the constitutional and statutory qualifications of voters, including the qualifications for voting in school elections. Different from those in most states, the qualifications for school electors in New York have always been more restricted than the requirements for voters at general elections. With certain exceptions in favor of persons having children in school, property-holding and taxpaying restrictions have been retained for voters in school elections.

The remainder of the book deals with the various types of school districts and their control. The first general education act, passed in 1795, established the "town" as the local unit for school administration. This legislation apparently followed the practice of New England. A law of 1812 provided for the division of each town into "suitable and convenient districts." Thus the school district became, and has continued to be, the "only organization created or recognized by the legislature for the sole purpose of school control" (p. 47). The demand for local popular control and the desire to regulate the tax rate have made it extremely difficult to abolish the district system. The only departures have been the creation of special districts of various kinds, such as the neigh-

[1] Carl H. Griffey, *The History of Local School Control in the State of New York.* Teachers College Contributions to Education, No. 683. New York: Teachers College, Columbia University, 1936. Pp. viii+136. $1.60.

borhood district, the central rural district, the central high school district, the village district, and the city district.

The actual control of the schools is vested partly in local school trustees elected by the voters of the local school district, partly in town school commissioners and town inspectors, and partly in a county school officer (after 1841). The composite nature of this control seems to reflect the conflict that evidently has gone on in New York for the control of the schools. However, the people in the various kinds of districts have succeeded in retaining large local control except in the cities. In eleven of the twenty-one cities with populations of more than thirty thousand, the school boards are appointed by the mayor, and in nineteen of these cities the school boards are required to submit their budgets to other governing bodies.

The volume, like other Teachers College Contributions to Education, is thoroughly documented. It properly fills a place in the historical literature of education pertaining to the evolution of school control in the United States. However, the reviewer, who is not a New Yorker, found great difficulty keeping in mind the relationships of the school officers of the various units of administration. Perhaps these relationships might have been presented more clearly. Too, little effort has been made to interpret the apparent conflicts for control which, to an outsider, appear to be there.

JOHN A. NIETZ

UNIVERSITY OF PITTSBURGH

Elementary social studies in picture pamphlets.—A new series of concise picture stories[1] fits into the growing demand for inexpensive pictorial-textual materials for use in the social studies of the elementary school. While each booklet of this series contains one integrated story, some of them are necessarily more general than others. Thus *Food* includes "Milk" and "Bread," each of which has a story to itself. In the fuller treatments the product is followed through the chief phases of production and marketing to consumption. An excellent job has been done in the selection of the facts to be presented in these and in the two booklets of a slightly different nature, *Trains* and *How the City Serves Its People*. These picture stories deal only with the present day and make no attempt to give any historical development. Consequently they may be fitted into varied types of programs.

The text is clear, terse, and interesting. It can be read with ease in Grade III and will be of value at higher levels. The plan is not to grade the series in vocabulary and style but to write each story simply enough so that it may be used in the hands of the pupils in Grade III or above. New terms are carefully introduced, although this introduction is a little less successfully made in *Trains* than in the other four booklets.

[1] The Follett Picture-Stories: *Milk* by Alta McIntire; *Bread* by Helen Harter; *Food* by Helen Harter and Alta McIntire; *Trains* by D. W. Follett; *How the City Serves Its People* by Alta McIntire. Chicago: Follett Publishing Co., 1936. Pp. 40 each. $0.15 each.

The illustrations, which in most cases occupy a half-page or more, are well chosen, are of interest to children, and illustrate clearly and simply what the text says they do. On each page appears text and, in most cases, only one of the pictures, although sometimes two or three of the smaller illustrations are used.

The mechanical makeup of the booklets has much to recommend it. The reproductions of photographs and the actual printing are clear and easy to read. The page arrangement of picture and lines of text also aid the readability. The size of the page (six and a half by eight inches) and the heavy paper make the pamphlets convenient to hold. It is a little disturbing, however, that the booklets have no title-pages nor title lines. If the cover were lost, as often happens with repeated use, the whole booklet loses an identifying name. The text and the pictures begin on page 1 opposite an inside cover filled with the publisher's advertising of the series. Coupled with the lack of title, this material is distracting to a child. The covers are not uniformly pleasing. For children, at least, there would be more attraction if the cover space were less broken up and less printing appeared on it.

The booklets under review are to be recommended to teachers looking for pictorial materials of accurate informational value. Other titles in the series are in preparation.

RUTH WATSON

Character-building through biography.—Here is a set of three volumes[1] designed to display the ennobling characteristics of human conduct through the lives of men and women who have lived abundantly and have achieved distinction. Many collections of biography have claimed a similar aim. To reveal the unique contributions of this set, it will be necessary to review the fitness of the editors for their task, the success of their selection from the immense resources of human record, and the suitability of the volumes for classroom use.

Under the auspices of the Institute of Character Research, Edwin Diller Starbuck and his staff prepared these volumes. Starbuck will be remembered as the principal editor of *A Guide to Literature for Character Training* and *A Guide to Books for Character*, the first appearing in 1928 and the second in 1930. Concerning the preparation of *Living through Biography* he says:

> The work lying behind the selecting of the material in this book and its companion volumes is probably *more thorough and more inclusive* than has been attempted heretofore. A staff of eight skilled persons spent more than two years reading and evaluating the biography available in English which has been written since the time of Plutarch. More than five thousand volumes were examined and most of them carefully analyzed [p. iii].

After this process of collection, groups of readers, well trained in literary evaluation and the teaching of children, subjected the material gathered to a

[1] Living through Biography: *The High Trail*, pp. xii+340; *Actions Speak*, pp. x+340; *Real Persons*, pp. xii+340. Selected and edited by Edwin Diller Starbuck and Staff, Institute of Character Research, University of Southern California. Yonkers-on-Hudson, New York: World Book Co., 1936. $0.96 each.

rigid examination and selection to form the three volumes. This selection was further checked against the interests of elementary-school and high-school pupils as revealed by their own statements and the studies of librarians and teachers. The resulting biographies for each volume are therefore of high literary value, lofty in theme though free from moralizing, and charged with interest for young readers.

The manner of presentation within the volumes, while not original, is clear and attractive. Each volume opens with a short introduction. The biographies are skilfully cut and assembled, with excellent head notes introducing both the subject of the biography and his biographer. In each volume there are nine rather full cuttings, of from thirty to sixty pages each, and a tenth unit entitled "Incidents and Letters." The brief sketches of this last section are packed with "human interest" and offer interesting side glances at well-known figures of the past and the present.

In addition to maintaining the high standards of quality and interest, the editors have not overlooked the problems of reading. A careful vocabulary check was made of each volume, several standard word lists being used. Each word beyond ordinary difficulty is contained in a glossary at the end of the volume, where the word is pronounced and defined. Despite this aid to the reader, it is my impression that some of the selections will prove fairly stiff going for average pupils, either because of the number of difficult words or because of the maturity of the concepts presented.

The books are attractive in size and binding and are well illustrated with photographs and pen-and-ink drawings. The print is excellent and is well leaded for easy eye-movement. I feel that these three small volumes will be warmly welcomed by teachers who are seeking fresh and stimulating material.

ROBERT C. POOLEY

UNIVERSITY OF WISCONSIN

A complete series of language books.—Teachers in "child-centered" schools will be interested in a series of pupil-centered language books.[1] The authors, Chester O. Newlun, director of demonstration schools in the University of Oklahoma, and Lucy H. Meacham, supervisor of elementary grades in Wichita, Kansas, have written these books directly to the pupils. According to the authors' statement, approximately half the space in the books is devoted to creative work, and practically all the illustrative materials have been written by pupils in classroom situations. Thus, this language program is based on the actual language experience of children, and the pupils appraise their own work

[1] Chester O. Newlun and Lucy H. Meacham, *My Own Language:* Third Grade, pp. xii+210, $0.52; Fourth Grade, pp. xii+216, $0.52; Fifth Grade, pp. xii+236, $0.52; Sixth Grade, pp. xii+272, $0.52; Seventh Grade, pp. xiv+332, $0.56. Garden City, New York: Doubleday, Doran & Co., Inc.

in terms of the best accomplishments of other children of their own age rather than in terms of adult standards.

The series consists of five books to be used in Grades III–VII, inclusive. All books in the series are alike in format and in the general plan of organization. There are approximately twenty chapters in each book. Some are devoted to types of oral and written expression: speaking and listening, story-telling and explanations, writing letters, writing poems, a citizenship club. Some pertain to correct usage: learning to speak correctly, using the right words. Some explain such skills as learning to use the dictionary, making book lists, and making outlines. Some give directions concerning capitalization and punctuation, and the later chapters in each book are devoted to principles of grammar. Apparently the authors have followed no logical sequence in determining the order of the chapters, and they have made no attempt to correlate the principles of grammar and correct usage with the oral and written expression.

The books should satisfy the most ardent devotees of technical grammar. In the Foreword the authors profess their belief in the thesis that a knowledge of the principles of grammar will effect an improvement of speech. Consistent with their belief, they have included much grammar in each of the books. Some of the parts of speech—nouns (common and proper) and pronouns—are introduced as early as Grade III. In rapid succession the concept of subject and predicate is introduced in Grade IV; the direct object in Grade V; cases (nominative, possessive, and accusative) of nouns and pronouns, and clauses and phrases in Grade VI. In Grade VII all the other principles of grammar are introduced: participles, infinitives, gerunds, principal parts of verbs (regular and irregular), conjugation of verbs, and diagramming of sentences. The authors indicate that these chapters on grammar may be considered optional, but they give little help to the teacher in deciding how a less ambitious grammar program might be worked out with these books in the hands of the pupils.

Throughout the books there is a tendency to introduce a new subject with all its complexities at the outset and then to repeat all the details in the subsequent treatments of the same topic. In letter-writing, for example, all the skills relating to the form of friendly and business letters are introduced in the same chapter. In addition to the mechanics of form, the pupils are confronted with relatively difficult problems of composition because two or more paragraphs are included in the body of the letter. As many as twenty specific items are listed as the basis for self-appraisal. Such a program appears to be rather formidable for young children. If the authors had singled out particular skills for emphasis at one time and added details as the pupils become more mature, their program would have been more in keeping with generally accepted principles of psychology.

The illustrations in the books are striking. They should help to make the series of books very appealing to children.

VIRGIL STINEBAUGH

ASSISTANT SUPERINTENDENT OF SCHOOLS
INDIANAPOLIS, INDIANA

CURRENT PUBLICATIONS RECEIVED

GENERAL EDUCATIONAL METHOD, HISTORY, THEORY AND PRACTICE

ALLEN, CHARLES FORREST; ALEXANDER, THOMAS; and MEANS, HENDREE WINSTON. *Extra-curricular Activities in the Elementary Schools.* St. Louis, Missouri: Webster Publishing Co., 1937. Pp. viii+604. $2.25.

BROADY, LOIS PEDERSEN. *Health and Physical Education for Small Schools.* Lincoln, Nebraska: Teachers College and the University Extension Division, University of Nebraska, 1937. Pp. xii+192.

CROW, CHARLES SUMNER. *Creative Education: Some Relations of Education and Civilization.* New York: Prentice-Hall, Inc., 1937. Pp. xxvi+456. $3.00.

DIMOCK, HEDLEY S. *Rediscovering the Adolescent: A Study of Personality Development in Adolescent Boys.* New York: Association Press, 1937. Pp. xx+288. $2.75.

GARRISON, CHARLOTTE GANO; SHEEHY, EMMA DICKSON; and DALGLIESH, ALICE. *The Horace Mann Kindergarten for Five-year-old Children.* The Horace Mann Plan for Teaching Children. New York: Teachers College, Columbia University, 1937. Pp. xii+146. $1.85.

HANUS, PAUL H. *Adventuring in Education.* Cambridge, Massachusetts: Harvard University Press, 1937. Pp. viii+260. $2.00.

MOONEY, EDWARD S., JR. *An Analysis of the Supervision of Student Teaching: A Study Based on the New York State Teacher-Education Institutions for the Preparation of Elementary-School Teachers.* Teachers College Contributions to Education, No. 711. New York: Teachers College, Columbia University, 1937. Pp. viii+160.

MORT, PAUL R., and CORNELL, FRANCIS G. *A Guide for Self-Appraisal of School Systems.* New York: Teachers College, Columbia University. Pp. vi+66. $1.20.

MORTON, ROBERT LEE. *Teaching Arithmetic in the Elementary School:* Vol. I, Primary Grades. New York: Silver Burdett Co., 1937. Pp. x+410. $2.40.

MUELLER, A. D. *Principles and Methods in Adult Education.* New York: Prentice-Hall, Inc., 1937. Pp. xx+428. $3.50.

NORDLY, CARL L. *The Administration of Intramural Athletics for Men in Colleges and Universities.* Teachers College Contributions to Education, No. 716. New York: Teachers College, Columbia University, 1937. Pp. viii+134.

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ROBINSON, EDGAR EUGENE. *Independent Study in the Lower Division at Stanford University, 1931–1937.* Stanford University, California: Stanford University Press, 1937. Pp. x+90. $1.50.

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BARKER, EUGENE C., GRIMM, MABEL ROCKWOOD, and HUGHES, MATILDA. *The Story of Earliest Times*, pp. viii+360; *The Story of Old Europe and New America*, pp. viii+404; *The Story of Colonial Times*, pp. viii+424. Evanston, Illinois: Row, Peterson & Co., 1936 and 1937.

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THE ELEMENTARY SCHOOL JOURNAL

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Educational News and Editorial Comment

HERE AND THERE AMONG THE SCHOOLS

An experiment in continued learning.—Blacksville, a rural village of about five hundred people, is located in the western end of Monongalia County, West Virginia. In the schools of this village is being carried forward, under the general supervision of County Superintendent Floyd B. Cox, an interesting experiment in continued learning. As Mr. Cox describes the plan of school work, children may enrol in the nursery-kindergarten school between the ages of one year and six months and five years, six months. Here they learn health habits and receive their first lessons in the great job of living with others. A well-planned diet fits into their daily schedule of work, play, and rest. The nursery-kindergarten school is used as a means of providing parent education. Mothers meet with the teachers, and together they study and observe the problems of child care.

Upon reaching six years of age, the children, provided their social maturation is average or above, pass into Grade I of a six-year elementary school, where an effort is made to bring them to feel themselves a part of the entire school system. At times they sponsor

and care for the nursery-kindergarten children; at times they work and play with pupils in the high school.

From Grade VI pupils are advanced to the junior high school, which is joined to the senior high school in a six-year plan. The curriculum of the junior high school is exploratory in nature. The content subjects are not lost sight of, but an opportunity is given for a broad survey in the fields of art, music, home economics, manual arts, camp arts, metal arts, and nature-study. A rich program of co-curricular activities is provided. In the six-year high school no pupil fails. Each is urged to work to within a reasonable percentage of his total capacity, and a minimum of work must be satisfactorily completed by all pupils. The program is so arranged that the able and ambitious pupil can complete the work of the high school in less than the usual time.

After leaving high school, many Blacksville graduates fail to enter college or secure regular jobs. This situation led to the establishment of an adult department in the school system. Last year, Mr. Cox reports, this department included parent education through the medium of the nursery-kindergarten school, evening classes in agricultural problems for farmers, weekly public forums sponsored by the federal government, evening library privileges at the school for adults, community singing for adults, and evening classes in ceramic art.

The pottery class was organized as a part-time class under the Smith-Hughes Act. Mr. Cox comments as follows on the work of this class and on the work of the school as a whole:

> In one sense our class is rather unique when compared with others of the state. Our plan is to embrace only such projects as will utilize, as far as is expedient, the raw materials found in the local community. With an abundance of excellent clays in this vicinity, our work has grown into activities which draw from other sections only the materials used in grinding and mixing the various glazes. Furthermore, one of our local teachers, Mr. Charles Tennant, who is a native of Clay district, was selected to design the pottery-arts shop and to instruct the pottery class. There is little, therefore, about the entire project that is not local. Students taking the pottery course learn the complete process. Their work takes them through the following steps: (1) the digging of the clay from the earth; (2) preparing the clay (little of our clay needs screening or straining but is used as it is taken from the vein); (3) the designing of shapes; (4) the building or throwing of shapes, both of which are hand operations;

(5) applying handles or spouts; (6) firing the bisque ware; (7) regulating kiln heats and drafts; (8) computing and grinding glazes; (9) glazing and firing the glost kiln; and (10) caring for the various materials.

Some excellent talent has also been discovered in modeling. The ability acquired by some in the class is worthy of commercialization for supplementing the regular income. Dean L. Ricketts, of Charleston, West Virginia, who visited our class said, "The entire staff of school officials in Monongalia County deserves the congratulations and support of all who believe in promoting other types of work that will rehabilitate people for private employment."

To date we have had more than three hundred visitors in our plant from places as distant as California, New York, and Texas.

Through such a continuous program of education as is being attempted at Blacksville, new worlds for many people lie yet to be discovered if only we "sail on, sail on and on."

In the successful operation of the school, I am deeply indebted to Mr. Hugh Shafer, the able and efficient principal. With his vision of education for the new age, his sound educational philosophy, and his ability to co-ordinate the preschool, elementary, high-school, and adult-education groups into a growing organism for demonstrating that education is a continuous process, he has been of inestimable value to me in working out the foregoing plan.

Informal pupil-home reports.—We continue to receive examples of the new-type report cards which many school systems are now adopting. One of the most striking of these has been supplied by Harold R. Maurer, superintendent of Garfield Heights City Schools, Cleveland, Ohio. This report form has attracted widespread attention; since its adoption Mr. Maurer has received numerous inquiries from school officials and teachers in all parts of the United States. A distinctive feature of this reporting practice is the clear and concise explanation to teachers of the kind of report that is desired. In the explanation the general features of the informal pupil-home report are outlined as follows:

1. The elimination of the old class competitive grading system. We believe that the child should be encouraged to compete against his own record. This sets up individual standards which are fair to all regardless of ability.

2. Special attention is called to the child's social behavior. Teachers should make adequate use of this provision.

3. Space is provided for your comments on any activities in which the child may have participated.

4. Under each subject, space is provided for remarks concerning that subject.

5. Space is provided for a health report.

6. Provision has been made for any remarks the parents may wish to make in writing to the teacher concerning the report.

7. No space has been provided to indicate tardiness. Frequently, tardiness is the fault of the parents, not that of the child. In every case of excessive tardiness, the teacher should include a report of the same in the space for "Comments" under "Attendance."

8. Teachers should use every available opportunity to explain this type of report to the parent.

Each of the foregoing general features is elaborated in detail. In passing judgment on the child's pattern of social behavior, teachers are asked to consider such desirable social traits as the following.

a) How well does he work and play with others?
b) Does he actively engage in social contacts?
c) Is he willing to take a stand for his own rights?
d) Does he defend others in their rights?
e) Is he sought by others?
f) How does he respond to praise?
g) Is he thoughtful of others?
h) Is he even-tempered?
i) What is his attitude toward authority?
j) Is he too quiet or too boisterous?
k) Does he have self-confidence?
l) Is he given to special fears?
m) Is he a good leader or does he have a tendency to domineer?
n) Is he willing to wait his turn?
o) Is he a good listener?
p) Does he respect others' property?
q) Is he sensitive to the needs and feelings of others?
r) Does he act too impulsively or is he inclined to think before acting?
s) Is he honest?
t) Is he clean of speech?
u) Can he accept defeat?
v) Is he reliable?
w) Is he polite in speech and action?
x) Is he destructive?
y) Is he overcritical of others?
z) Does he seem to worry?
a-2) Is he usually cheerful?
b-2) Does he make friends easily?
c-2) Can he adapt himself to new situations?

The Saginaw curriculum program.—From Superintendent Chester F. Miller, of Saginaw, Michigan, we have received an account of the steps being taken to revise the curriculum of the schools of that city.

A distinctive feature of the program is the expert assistance which is being secured from outside the city system. Dr. O. I. Frederick, of the University of Mississippi, is in general charge of the program. Dr. Frederick served for two years as assistant specialist in school organization on the National Survey of Secondary Education, and for the past three years he has been active in the state-wide curriculum program in Mississippi. Twelve members of the faculty of the University of Michigan are also giving some assistance in carrying out the program. Each of these will deliver a lecture and hold a conference on a vital phase of curriculum development. Each of the five hundred members of the faculty of the Saginaw schools is devoting two hours a week to study of curriculum problems. For that purpose instructional materials are being set up in a laboratory, which is equipped with some three hundred professional books, recent issues of thirty or more educational periodicals, a collection of selected courses of study, and a thousand outstanding recent schoolbooks.

A program for keeping the public informed about the work of the schools.—In order to keep parents informed with respect to the purposes and the accomplishments of the schools, Superintendent C. R. Stone, Munhall, Pennsylvania, has adopted the policy of sending home with each report card a four-page bulletin entitled the *Home Visitor*. The first number of the *Visitor* calls attention to the library facilities of the school system, to the special assembly programs which have been arranged for the year, to the program for American Education Week, and to the use that the schools are making of sound motion pictures. Parents are requested to give suggestions with respect to the work of the schools about which they would like to have information. In addition to the *Home Visitor*, Superintendent Stone is publishing for distribution a number of special pamphlets. The first of these is a directory of the school district, which gives pertinent information about all the school officials and teaching staff of the district.

Giving safety education a place in the curriculum.—It is evident that many schools throughout the country are giving increased attention to the matter of safety education. One of the best worked-out programs which has come to our attention is that of the Lincoln

School, Chisholm, Minnesota. As a part of this program the Lincoln Junior Safety Council publishes each year a mimeographed volume of some fifty pages bearing the title "Safety Sentinel." The "Sentinel" is published by the pupils; the content is well prepared; and the illustrations are both numerous and excellent.

Superintendent James H. Lawson informs us that he is introducing a program of safety education into the schools of McKeesport, Pennsylvania. At present the student council is sponsoring the program, which consists in the study in the classrooms of an approved textbook on traffic safety, use of films on traffic safety, talks by well-informed speakers, mock trials of traffic offenders, and a poster campaign.

Guidance in the conduct of community centers.—For a number of years the Board of Education in Newark, New Jersey, has been conducting recreation centers in some of the school buildings in the city. A publication entitled "Lafayette Community Center" has been sent us by the director of the center, Peter C. Fujarcyk. This bulletin describes the organization and the conduct of one of these enterprises. Attention is given to such matters as the following: "Organization Policies," "Objectives of the Recreation Program," "Facilities for Program-building," "The Advisory Council," and "The Interclub Council." School administrators elsewhere will find in this publication many helpful suggestions with respect to the organization and conduct of community centers. Inquiries should be addressed to Mr. Fujarcyk, Lafayette Street School, Newark, New Jersey.

Predicting Success in Teaching

The Department of Educational Research of the University of Toronto has published a bulletin entitled *Forecasting Teaching Ability*. The bulletin reports the results of two experiments to discover criteria for the selection of beginning teachers. The first study dealt with teaching ability in prospect. In the autumn of 1934 the entering students of Ontario College of Education were given a number of intelligence, achievement, and personality tests. A searching questionnaire was filled out by each student. Students were also interviewed individually and rated in a number of ways. None of these measures, however, proved of much value in pre-

dicting teaching success. "A student could be both intelligent and learned, yet fail egregiously as a teacher." The findings of this investigation are summarized in the following paragraphs.

1. Ability of students in teaching is not closely related to intelligence above that necessary for college graduation. In other words, if a student has sufficient intelligence to complete his university course successfully, higher intelligence does not seem to be necessarily of value in teaching.

2. Ability of students in teaching is not closely related to achievement in special subjects. Neither the comprehensive objective tests nor the specialist examinations proved to be of value in predicting teaching ability. It must not be forgotten, however, that while the correlations were all low, they were also all positive, showing that the good student is slightly more apt to succeed as a teacher than the poor student.

3. Ability in practice teaching is not measured by "personality" tests. In fact, considerable doubt exists at the present time as to what, if anything, these tests do measure. Measurement of personality traits is of no value if these traits are arbitrary and unrelated to other phases of human life.

4. The teaching averages obtained in the first term are only a fair index of the final teaching average. This may be due to greater familiarity with certain subjects not evenly distributed over the course, to changes in attitude, or to unreliability of the teaching marks.

5. Improvement during the period of training is not closely related to intelligence as measured by group tests.

6. If a student starts out well, he has a slightly better chance of improvement than if he starts poorly. This would seem to indicate that if a student has a natural aptitude for teaching, it shows up early.

7. Certain items of information as determined by a questionnaire appear to be of value in selecting successful teachers. These items have not yet been standardized, but may be used as indications of the value of certain information in selecting teachers.

8. Ratings of students based on interviews of short duration, even when conducted by a number of raters, are not sufficiently reliable to be used for prognosis. There is close agreement between the opinions of different raters, but even average ratings do not agree closely with critic teachers' marks.

9. Experienced instructors at the Ontario College of Education are unable, early in the term, to segregate effectively those who will prove successful teachers from those who will not.

10. It is easier to select the better students than it is to eliminate the poorer ones. This suggests that encouraging the attendance of the better students would be more effective than discouraging the poorer ones.

11. The averages given by critic teachers concentrate in a narrow range of six marks from 65 to 70 per cent, inclusive.

12. These marks given by the critic teachers appear to be heavily weighted

by chance, and are being investigated further. If two critic teachers judged the same lesson as worth 65 per cent and 70 per cent, respectively, this apparently close agreement would really signify a difference of opinion covering the range in marks of 150 students.

The second study undertook to discover the traits or capacities crucial to success in teaching by an examination of the records of students who had been graduated by the Ontario College of Education during the ten-year period 1921–30. These students had been rated annually by inspectors for at least five years. It was hoped that, when the ratings of success in teaching were compared with marks in high-school or college, some conclusions could be drawn with respect to means of predicting teaching success. The following paragraphs present a summary of the findings and conclusions of this study.

1. Three methods of estimating the degree of success of teachers have been devised in this investigation: (*a*) The first, Rating 1, was based on the estimates of the inspectors from personal knowledge of the teachers with whose work they were familiar. (*b*) In the second, Rating 2, the seven high-school inspectors assigned grades to each teacher in the light of the comments which they made individually on that teacher when making inspectoral visits. (*c*) In the third, Rating 3, seven members of the staff of the Ontario College of Education assigned grades on the basis of the same comments used in Rating 2.

Each of these three methods of rating has a high degree of reliability.

2. Teaching success has low correlation with marks obtained in the Ontario College of Education. Every correlation with teaching success calculated was below .20, except that for practice teaching, which was .377.

3. Practice-teaching marks have some value in predicting success or failure in the field. Of the twenty-eight teaching failures for whom recent practice-teaching marks were available, eight had practice-teaching marks below 480, and six had practice-teaching marks between 480 and 489 [maximum mark possible, 800; passing mark, 480]. Only one of the ten students receiving practice-teaching marks below 480 in 1925–26 became an average teacher; none was better than average. Three of the twenty students receiving marks of 480 to 489 became average teachers; five were better than average.

4. The success of practice-teaching marks in predicting failure, although substantial, was far from complete. Half of the failures discovered had practice-teaching marks of 490 or more. The reason for this lies in the method of conducting practice teaching then in use. It is altogether likely that recent attempts to have practice teaching take place under classroom conditions which are more nearly normal will increase the prognostic value of practice-teaching marks.

5. Students rejected in their first attempt to obtain teaching certificates are

not likely to become successful teachers. Of the twenty-one rejected students studied, only five did not obtain certificates later. Of the remaining sixteen, three did not teach in secondary schools; of the thirteen who did, eight were failures or on the border line between success and failure, and five became average teachers only.

The Baltimore Curriculum Study Program

Few areas in American education have been subjected to more intensive investigation than the curriculum. During the past two decades city after city has marshaled its teaching force in an attack on the problems of curriculum reconstruction, and not infrequently the attack has been on a state-wide front. Many are the books which have been written on the subject, and various are the philosophies advanced with respect to what constitutes a "scientific curriculum." Literally thousands of courses of study have been prepared. Yet, despite all the labor and activity, the curriculum remains an area sorely in need of investigation. Perhaps investigation in this field will always be needed to a greater or less degree. For the curriculum, in its very nature, cannot be the same at all times and in all places; it is no more changeless than society; and only through the curriculum can the social obligations of the school be discharged. It is exactly at this point, however, that much curriculum work falls down. To make a satisfactory curriculum, at least in the area of the social studies, one must have a comprehensive understanding of the workings of our economic, social, and political arrangements—an understanding far deeper than that possessed by many who undertake the task of curriculum reconstruction. The work of the curriculum-maker is often conceived in terms which are too simple. It is not enough to formulate certain broad generalizations about the functions of education and the nature of the child and then proceed to examine scores of courses of study in an attempt to discover the kind of program that is needed. Such a procedure, to be sure, is not without its value; it does help the poorer schools to approach the level of efficiency of the better schools. At best, however, it is only a halfway measure. A curriculum laboratory, many of which have been established in recent years, needs a rich collection of courses of study, but this is not the greatest of its needs. Of more importance is a rich collection of documents which may be made to contribute to an understanding of such matters as the role of the large corpora-

tion in modern society, the distribution of income in relation to the maintenance of a balanced economy, the educational implications of the impact of technology on the pattern of the worker's life, the educational problems of a changing population, the role of government as a social agency, and a score of other problems of similar import. The term "curriculum laboratory" is something of a misnomer; if the task of curriculum reconstruction is properly conceived, the curriculum workers will utilize the total intellectual resources of society.

In Baltimore a system-wide program of curriculum study is in progress which appears to be extremely well conceived. The *Baltimore Bulletin of Education* carries a description of the program, prepared by Assistant Superintendents William R. Flowers, J. Carey Taylor, and Charles F. Willis. The following paragraphs are quoted from the bulletin.

The varied educational philosophies of the committee members, their uncertainty regarding the school's social responsibilities, and their lack of familiarity with the major social, economic, and political problems of the day made it desirable to undertake a program of study and research activities that would produce a frame of reference, if not an agreed-upon philosophy of education for the public schools.

Hence, the Board of Superintendents prepared a list of many present-day problems and submitted them to the members of the committee, requesting them to select those which they felt to be of the greatest importance. Of these problems, the following were selected, partly because they drew the largest number of votes and partly because they gave a fair sampling of the social, economic, and political questions of the day:

1. Effect of technological development upon society
2. The family in present-day life
3. International problems and their import
4. Disrespect for and attitudes towards authority
5. The government in relation to social welfare
6. The conservation of natural resources
7. Function and scope of education in our present American democracy
8. Evolution in a social democracy

To study these eight problems, the general committee was subdivided into topic committees varying in membership from seventeen to twenty persons each. The selection was made, as far as possible, in accordance with the interests of the individuals; but each group was carefully organized to include principals, vice-principals, supervisors, and teachers, as well as representatives of the various subject-matter fields. These topic committees, working under the gen-

eral leadership of the superintendent and his assistants, began their study of the selected problems in the fall of 1935. The first task was the assembly of initial bibliographies, and the second was the organization of tentative outlines for the proper development of each topic. An account of the progress of each topic committee reveals the values that have accrued from the study of these modern problems. . . . .

The absence of a plainly detailed program of action for the further direction of the several curriculum committees is a fact that does not seriously alarm either the Board of Superintendents or most of the committee members. So manifestly has the serious consideration of the selected social, economic, and political questions had a distinctly broadening and deepening effect upon the thinking of all who have participated, that instead of insisting upon a culmination of the studies under way, there is an increasing recognition of a need for further study and discussion. A number of requests have been received for an extension of the investigation to other problems of social and economic significance. Conscious effort will be required to confine the present undertakings to their specific objectives in order to prevent unnecessary diffusion of energy. For the time being, the objectives of the current program will be limited to insure concentration upon the production of new curriculum materials which will meet the needs revealed by the present seven subcommittees. . . . .

The further the studies of the local curriculum committees are carried, the more convinced the members become that there is a need for expert discussion and suggestion. By reason of the highly complex nature of the selected problems, it is not possible for persons, inexpert but interested, to interpret accurately unaided the voluminous and intricate data that are available; let alone, determine fundamental generalizations which will direct the future curriculum. Each of the committees has already expressed a desire to have the benefit of one or more experts to examine and criticize its tentative reports. At first, local authorities in the several areas of study will be invited to assist in the work. Thereafter, some, if not all, of the committees will desire to have the judgment of other experts in the field, particularly where it is known that significant differences of opinion prevail among the authorities. The purpose of such consulting service is to insure that all revisions of the curriculum will be sufficiently comprehensive and will be directed toward socially desirable ends. In this way, the Curriculum Committee and the Board of Superintendents will formulate policies, problems of scope and function, while the more technical questions relating to content and materials will be answered in a large measure by the consulting experts.

The Problem of Youth in the Nations of the World

The National Youth Administration has recently published a volume entitled *Youth: A World Problem*, carrying the subtitle "A Study in World Perspective of Youth Conditions, Movements, and Programs." The purpose of the publication is to raise and answer

such problems as the following: Is there actually a youth problem? If so, how have other countries attempted to solve it? What measures have other governments taken to give young people vocational education or to alleviate the unemployment of youth? Which, if any, of these measures might be applicable to the problems of youth in the United States?

Most of the data presented were gathered by the Department of State of the United States and its foreign-service officers. The Department of State requested consuls stationed in all parts of the world to submit reports on youth conditions and programs in their respective countries. The data have been rewritten and presented in a form as objective as possible. The purpose of the study is to provide students of youth and its problems with a reliable and up-to-date account of world-movements in this area.

This publication may be secured for twenty-five cents from the Superintendent of Documents at Washington, D.C.

Recent Trends in Education in Latin America

A summary of recent educational trends in the various countries of Latin America, prepared for the use of students in comparative education by Ernesto Galarza, assistant in the Division of Intellectual Co-operation of the Pan American Union, has been published in mimeographed form. The following summary of the most significant recent educational developments in the Latin American countries should be of interest to teachers in the United States.

During the past year a marked trend toward nationalism has characterized Latin American education. Many governments have become especially concerned with the rural population living on the territorial fringe, where it is felt that sentiments of patriotism and national loyalty should be particularly strong. The lack of schools in these frontier areas has led many educators to fear that large numbers of future citizens will come of age without having become strongly imbued with the culture and viewpoint of their fellow-citizens. To counteract this possibility, special efforts have been made (Argentina, Mexico, Peru, Bolivia, Uruguay) to study educational problems in these areas and to set up schools equipped to meet them. In general, the feeling has gained ground that the school is the best means for the maintenance of cultural, social, and political characteristics of the nation. In order that the schools may continue to insure national integrity, increasing stress has been laid on the study of local history, geography, and politics as well as on civics and patriotism.

Secondary schools (Chile, Peru, Venezuela, Argentina) in particular have

been thought lacking in a nationalist orientation, and too much concerned with the preparation of students for university and professional careers. Changes have been made in the curriculums which look to the strengthening of the nationalist outlook as well as to the theoretical and practical training of students who will not continue beyond the secondary school. The great disparity which is usually evident between the enrolment in the elementary and secondary schools has been recognized as a major problem whose solution must await increases in the educational expenditures.

Normal schools have undergone a standardization of courses of study, a uniformization of administrative practices, and a limitation of enrolment through the enforcement of higher standards (Mexico, Argentina, Brazil, Venezuela, Chile). Uniform practices within many of the Latin American republics have been set up with a view to facilitating transfers, entrance requirements and establishing norms for teacher rating. The limitation of enrolment has been sought and attained through the efforts of both government officials and teachers in service, the former finding it increasingly difficult to place normal graduates in the state schools. Though the need for a larger number of classroom teachers is evident in the teaching load, which in some cases reaches a ratio of one hundred pupils per teacher, the restricted appropriations of the depression years have not recovered sufficiently to allow an increase in appointments. Aside from the enforcement of higher standards, restriction of enrolment in normal schools has been achieved by limiting the granting of licenses by state and provincial authorities.

Rural education, as in the past, has shown the close relationship that exists between racial, cultural, and economic problems, so far as the education of the masses is concerned (Bolivia, Colombia, Cuba, Uruguay, Ecuador). The rural school has been required to carry a heavy load of social-welfare work, industrial training, adult education, and technical progress. On the whole, it has been felt that the principal function of the rural school is to train boys and girls to make economical use of the raw materials at hand, to meet their own needs as consumers, and to develop small, local industries to this end. In a period of economic contraction, this view of rural education is the only one that will permit the state to fit its philosophy to its income; but it is a question how permanent this view might be should the social forces at work before the depression once more resume their course. Highways, for example, which are slowly spreading in a huge network over the continent, have tended to favor large-scale production for the market as against local industries for home use and for barter. Basically, the problem consists in the unproductiveness of antiquated methods in farming, the consequent impoverishment of rural communities, and the drabness of life for pupils and teachers in those areas. In attempting to correct this situation, which in the case of teachers causes unwillingness to remain long in a rural school, various governments, notably that of Cuba, have offered inducements in the form of higher salaries or bonuses.

The interest in modern educational methods, especially in the elementary

grades, has become more intense. Several new magazines (*Caminos* of Panama, *Nueva escuela* of Cuba, *Cronica educacional* of Argentina, *Educación* of Bolivia) have been founded for the purpose of disseminating information concerning those methods and to stimulate research and interchange of ideas. Secondary- and normal-school curriculums have been reconstructed (Costa Rica, Mexico, Chile, Peru, Venezuela) with a view to lessening the traditional emphasis on memorizing, textbook instruction, and passive learning. This movement, although stimulated by the writings of foreign experts, is characterized by caution in not attempting to apply foreign ideas without adaptation to local peculiarities and needs. On the whole, the introduction of the activity program on the elementary level particularly, has been beneficial largely in the searching theoretical discussion of principles which it has provoked. It has also led to the establishment (Uruguay, Venezuela, Bolivia, Brazil) of experimental schools which in time will test the practicability of those theories. The increase of school expenditures which a progressive type of instruction implies has not materialized, leaving the introduction of progressive education a responsibility that falls largely on the classroom teacher.

The important bearing that problems of health, housing, and nutrition have on the problems of teaching has been more and more recognized (Argentina, Costa Rica, Uruguay, Ecuador), giving rise to a series of studies on those problems. Such studies, particularly those on the medical services provided by the schools, are limited in scope but promising in their spirit and method. Physical education has been actively promoted, particularly in the Central American republics, Peru, and Chile. The co-operation of parents and lay associations in the home and community adjustments of school children, especially those of the poorer classes, has been stimulated by increased knowledge concerning those problems. Many *patronatos* and parent-teacher associations have been successful in the provision of free lunches, the distribution of clothing, and the opening of summer camps.

The foundations for a more active interchange of students and teachers than any heretofore known in the Americas were laid by the peace conference held in Buenos Aires in December, 1936. According to a convention signed at that conference, every American republic, once ratification is secured, will grant every year two fellowships to graduate students or teachers from each of the other republics. Should all the countries ratify the treaty, there will eventually be, according to ideal conditions envisioned by this plan, more than eight hundred students and four hundred professors actively engaged in research, teaching, and lecturing throughout the American continents.

Guides to the Use of Motion Pictures in Education

Some years ago the American Council on Education recognized the need of an appropriate agency to act as a national clearing-house for educational motion pictures. Under a grant from the General

Education Board, the council organized a Committee on Motion Pictures in Education. The committee has recently published two timely booklets, one bearing the title *The Motion Picture in Education: Its Status and Its Needs*, and the other *Teaching with Motion Pictures: A Handbook of Administrative Practice*. The first booklet is a concise review of five major problems which must be considered by anyone interested in the development of visual education. These problems are analyzed, and suggestions for solving them are made which may be followed by any administrator in his own school system. The second booklet deals specifically with the major problems of the use of motion pictures in the classroom. It is intended for the teacher and the administrator, and it provides concrete answers to the most frequently posed questions relating to motion pictures and other visual teaching materials. Concise, pertinent information is presented on such questions as the desirability of using educational films in a school system; the kind of motion-picture equipment most suitable; the financing of a motion-picture program; the choice between sound and silent films; sources of films; the choice between sale, rental, or free-loan films; the selection of films; the selection and the duties of the person in charge of equipment; the storing, the handling, and the distribution of films; the servicing of films and equipment; the records necessary in handling films; training teachers in the use of films and equipment; methods of teaching with films; and the evaluation of the motion-picture program. A source list of films, a bibliography, and a glossary of technical terms are also included.

Phi Delta Kappa Enters a New Area of Publication

Educational Abstracts, formerly owned and edited by Norman J. Powell and associates, of New York City, has recently become the property of Phi Delta Kappa, educational fraternity. The first issue of the journal under the new management appeared in December under the editorship of Paul M. Cook and associate, W. A. Stumpf. With this issue the journal completed its second volume.

Several changes in policy will become effective with the first issue of Volume III. To the thirty-four classifications which have been in use will be added two new categories—"Agricultural Education"

and "Methods of Teaching." Another classification is contemplated in which will appear abstracts of articles on education published in lay magazines. Under this expanded classification the editors contemplate a thoroughly representative coverage of the significant publications in education, including books, articles, and bulletins. In addition, significant unpublished researches will be abstracted provided they are available for interlibrary circulation.

While *Educational Abstracts* now carries many abstracts of foreign publications, this area will be developed much more adequately than it has been. Eventually the publication, with the co-operation of educators in foreign countries, will be definitely international in scope. Obviously this international coverage may come to be a feature of more than usual importance to educators in this country who wish to keep abreast of the advances being made abroad.

Phi Delta Kappa is fully aware of the non-profit nature of this new undertaking and, as a matter of fact, expects to underwrite the project for several years if necessary. There seems to be a definite opportunity for service in the undertaking, and on that basis the association has accepted and is sponsoring the publication.

The new address of *Educational Abstracts* is 1180 East Sixty-third Street, Chicago, Illinois.

Who's Who in This Issue

Paul R. Mort, professor of education at Teachers College, Columbia University. Eugene S. Lawler, associate professor of education at Northwestern University. William A. Brownell, professor of educational psychology at Duke University. Carleton Washburne, superintendent of schools at Winnetka, Illinois. Mabel Vogel Morphett, director of Research Department of the Public Schools at Winnetka, Illinois. Frederick S. Breed, associate professor of education at the University of Chicago. Frank H. Gorman, principal of the elementary division of the Laboratory Schools and assistant professor of education at the University of Missouri. William C. Reavis, professor of education at the University of Chicago. Nelson B. Henry, associate professor of education at the University of Chicago.

COMPARISON OF THE ABILITY OF RURAL AND URBAN AREAS TO SUPPORT EDUCATION

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Because the best and the most favorably known school systems are located in cities and because many rural schools are known to be poor, it is usually taken for granted that one of the great tasks of American education is to bring rural education up to the standards already attained in the better urban schools. Because it is well known that large volumes of wealth are concentrated in cities and that agriculture is one of the least profitable pursuits, it is commonly supposed that the cities are rich and that rural territory is poor. Any program which is designed to equalize the burden of supporting the educational program throughout the state is thought by many to be largely a method of assisting rural territory.

Under a system of local administration and support of schools, the ability of the various local units to furnish the necessary financial support is a serious matter. If all localities could support a reasonable program of education with equal ease, the state could require the support of schools out of local funds in all communities without inflicting injustice on any community or taxpayer. If the state should desire to distribute aid in order to relieve the property tax, it would be equitable to do so on a basis of some flat measure of need, such as a certain amount per pupil, that would make no distinction between districts. However, a condition of uniform wealth and ability to support education does not exist in any state. It is a matter of common knowledge that in every state there are rich districts and poor districts, some school districts that can easily support the most elaborate system of education and others that can scarcely maintain a school at all.

In an investigation of the comparative abilities to support educa-

tion of districts of varying degrees of urbanization, data from the five states of Iowa, Oklahoma, Oregon, South Carolina, and Washington were so treated as to express the relative ability of each community in each state to support schools. Since the only tax that a local community can successfully collect is the property tax, arranging the data to show relative ability means distributing the districts according to their taxable valuations.[1] In case it was available, the full valuation of property liable to taxation in the district, instead of the assessed valuation, was used.

The total educational load of the community for a reasonable educational program was expressed in terms of elementary classrooms, according to the method set forth in *State Support for Public Education*.[2] Then the assessed or full valuation of the district was divided by the total number of classrooms which expressed its load. The quotient gives the valuation of taxable property behind each classroom—a measure which, crude as it is, is as good as any available at the present for measuring the relative ability of communities to support an educational program.

The results of the procedure may be summarized for the five states in a brief space. The districts of each state were arranged in ascending order of taxable wealth per classroom. The poorest districts, which contain 3 per cent of the classrooms in the state, were grouped together. Then the next poorest districts, which contain the next 7 per cent of the classrooms in the state, were grouped together, and so on. The districts of the state were divided into eight groups with 3, 7, 15, 25, 25, 15, 7, and 3 per cent of the classrooms in the state arranged in ascending order of wealth, as shown in Figure 1.

0–3	3–10	10–25	25–50	50–75	75–90	90–97	97–100
Group I 3 per cent of classrooms	Group II 7 per cent of classrooms	Group III 15 per cent of classrooms	Group IV 25 per cent of classrooms	Group V 25 per cent of classrooms	Group VI 15 per cent of classrooms	Group VII 7 per cent of classrooms	Group VIII 3 per cent of classrooms

Low Ability — High Ability

FIG. 1.—Scale of ability to support education in a given state

[1] For a discussion of the fallacy in using economic ability as the criterion, see: Paul R. Mort, *State Support for Public Schools*, pp. 16–17. New York: Teachers College, Columbia University, 1926.

[2] Paul R. Mort, assisted by the Research Staff of the National Survey of School Finance, *State Support for Public Education*, pp. 120–23. Washington: American Council on Education, 1933.

As was to be expected, the variation in ability to support schools between the wealthiest and the poorest districts in any one of the states was found to be great. For the sake of convenience in presentation, Table 1 gives the valuation in thousands of dollars per classroom for districts lying at the division points between the zones marked out on the scale shown in Figure 1.

The variation in ability to support schools is greater in some states than in others because of differing natural endowments. In Table 1 the highest valuation shown for Oklahoma is approximately eleven

TABLE 1

TAXABLE VALUATION OF DISTRICTS PER ELEMENTARY CLASSROOM AT VARIOUS PERCENTILE POINTS ON SCALE OF WEALTH IN FIVE SELECTED STATES*

State	Valuation (in Thousands of Dollars) at Percentile Point						
	3	10	25	50	75	90	97
Iowa	13	19	24	34	43	49	64
Oklahoma	21	31	46	76	106	181	226
Oregon	32	61	91	136	196	241	466
South Carolina	6	7	13	22	37	52	67
Washington	68†	82	136	199	236	271	532

* Read as follows: In Iowa the district 3 per cent from the bottom in ability to support education has an assessed valuation of 13 thousands of dollars per elementary classroom, the district 10 per cent from the bottom has an assessed valuation of 19 thousands of dollars per elementary classroom, and so on.

† The great range in apparent wealth per classroom between states is due to differences in the percentages that assessed valuation is of true valuation more than to differences in wealth.

times the lowest, while Iowa's highest valuation is about five times the lowest. Since Iowa is rather uniform and Oklahoma varies from extremely poor agricultural land to rich oil fields, it is not surprising that a greater contrast in the ability of different communities to support education is found in Oklahoma. It should be noted in this connection that the extremes of wealth and poverty are not shown in the table, there being 3 per cent of the classrooms in the state in districts poorer than the third percentile valuation given, and 3 per cent of the classrooms in districts richer than the ninety-seventh percentile valuation. In any state in which the district system is used, it is comparatively easy to find districts twenty or more times as wealthy as the poorest districts in the state. If, to the variation in ability to support schools due to differences in taxable wealth in the districts,

there be added the tendency of the many state-aid systems to allot the major part of state aid on some basis which makes no discrimination between the more and the less able districts, it is easy to see that educational equality and equality of tax burdens are out of the ques-

TABLE 2

PERCENTAGE DISTRIBUTION OF SCHOOL ADMINISTRATIVE UNITS OF VARIOUS CLASSES ACCORDING TO THEIR ABILITY TO SUPPORT EDUCATION

Classification of City or District	Percentage in Ability Group*								
	I (Lowest 3 Per Cent)	II (4–10 Per Cent)	III (11–25 Per Cent)	IV (26–50 Per Cent)	V (51–75 Per Cent)	VI (76–90 Per Cent)	VII (91–97 Per Cent)	VIII (Highest 3 Per Cent)	Total
Cities with populations of 100,000 or more	.....	.....	.....	.....	55	34	11	.....	100
Cities with populations of 30,000 to 99,999	.....	.....	7	31	10	7	3	42	100
Cities with populations of 10,000 to 29,999	.....	2	16	20	15	23	22	2	100
Cities with populations of 2,500 to 9,999	1	9	25	34	22	8	1	.....	100
Districts with more than 10 classrooms†	4	12	31	32	13	3	4	1	100
Districts with 2 to 10 classrooms	4	8	21	30	18	8	8	3	100
Districts with 1 classroom	4	3	11	17	22	15	14	14	100

* These figures are unweighted averages derived from Table 3.

† But with populations of less than 2,500.

tion under such arrangements unless the amount of the state aid is sufficient to support completely an adequate educational program.

These data on the relative ability of school districts to support schools include all the districts of the state. When the location of each type of district on the scale of ability was examined, it was found, as shown in Table 2, that, of the classrooms in cities with populations of 100,000 or more, 55 per cent fell in Group V, 34 per

TABLE 3

PERCENTAGE DISTRIBUTION OF SCHOOL ADMINISTRATIVE UNITS OF VARIOUS CLASSES ACCORDING TO THEIR ABILITY TO SUPPORT EDUCATION

Classification and State	Percentage in Ability Group							
	I (Lowest 3 Per Cent)	II (4–10 Per Cent)	III (11–25 Per Cent)	IV (26–50 Per Cent)	V (51–75 Per Cent)	VI (76–90 Per Cent)	VII (91–97 Per Cent)	VIII (Highest 3 Per Cent)
Cities with populations of 100,000 or more:								
Iowa	.....	.....	.....	.....	100.00	.....	.....	.....
Oklahoma	.....	.....	.....	.....	.....	55.01	44.99	.....
Oregon	.....	.....	.....	.....	100.00	.....	.....	.....
South Carolina	.....	.....	.....	.....	.....	.....	.....	.....
Washington	.....	.....	.....	.....	17.72	82.28	.....	.....
Average	.....	.....	.....	.....	54.43	34.33	11.24	.....
Cities with populations of 30,000 to 99,999:								
Iowa	.....	.....	30.76	.....	17.91	27.00	16.14	8.19
Oklahoma	.....	.....	.....	.....	.....	.....	.....	100.00
Oregon	.....	.....	.....	88.12	11.88	.....	.....	.....
South Carolina	.....	.....	.....	.....	.....	.....	.....	100.00
Washington	.....	.....	4.89	66.37	21.45	7.29	.....	.....
Average	.....	.....	7.13	30.90	10.25	6.86	3.23	41.63
Cities with populations of 10,000 to 29,999:								
Iowa	.....	5.95	48.72	40.34	4.99	.....	.....	.....
Oklahoma	.....	.....	.....	18.57	39.96	19.81	15.41	6.25
Oregon	.....	.....	.....	.....	.....	.....	.....	.....
South Carolina	.....	.....	.....	.....	.....	48.52	51.48	.....
Washington	.....	.....	.....	.....	.....	.....	.....	.....
Average	.....	1.98	16.24	19.64	14.98	22.78	22.30	2.08
Cities with populations of 2,500 to 9,999:								
Iowa	1.94	23.40	37.23	33.69	3.11	0.63	.....	.....
Oklahoma	.....	6.32	.....	57.93	31.10	4.65	.....	.....
Oregon	.....	.....	.....	13.73	53.87	29.54	2.86	.....
South Carolina	.....	.....	.....	.....	.....	.....	.....	.....
Washington	.....	5.62	63.88	30.50	.....	.....	.....	.....
Average	0.49	8.83	25.28	33.96	22.02	8.70	0.72	.....

TABLE 3—*Continued*

Classification and State	Percentage in Ability Group							
	I (Lowest 3 Per Cent)	II (4–10 Per Cent)	III (11–25 Per Cent)	IV (26–50 Per Cent)	V (51–75 Per Cent)	VI (76–90 Per Cent)	VII (91–97 Per Cent)	VIII (Highest 3 Per Cent)
Districts with more than 10 classrooms:*								
Iowa	4.95	18.11	27.27	35.19	12.58	1.46	0.24	0.20
Oklahoma	0.66	6.93	28.43	43.59	15.02	1.88	1.94	1.55
Oregon	6.20	16.00	43.69	19.95	4.62	2.75	6.79	.....
South Carolina	2.30	5.56	20.77	31.97	19.58	9.50	7.21	3.11
Washington	3.33	14.00	34.05	30.11	10.87	1.35	5.96	0.33
Average	3.49	12.12	30.84	32.16	12.53	3.39	4.43	1.04
Districts with 2 to 10 classrooms:								
Iowa	5.91	12.78	19.46	34.45	19.94	3.96	2.03	1.48
Oklahoma	2.38	9.75	20.76	38.23	16.45	8.38	1.20	2.85
Oregon	5.62	7.05	22.41	25.08	19.73	8.03	8.61	3.47
South Carolina	1.01	6.66	26.95	31.84	21.03	7.46	3.05	2.00
Washington	5.74	6.99	15.41	21.27	12.05	10.62	24.46	3.46
Average	4.13	8.65	21.00	30.17	17.84	7.69	7.87	2.65
Districts with 1 classroom:								
Iowa	0.86	1.16	4.03	17.71	31.26	23.63	16.45	4.90
Oklahoma	0.77	3.12	7.05	24.99	23.40	25.22	9.94	5.51
Oregon	8.24	5.29	14.70	16.47	15.87	8.23	19.99	11.21
South Carolina	3.31	.83	13.23	12.35	36.35	13.23	3.32	17.38
Washington	6.06	5.31	15.15	12.86	6.06	3.79	19.72	31.05
Average	3.85	3.14	10.83	16.88	22.59	14.82	13.88	14.01

* But with populations of less than 2,500.

cent in Group VI, and 11 per cent in Group VII. About 7 per cent of classrooms in cities with populations of 30,000 to 99,999 were in Group III, 31 per cent were in Group IV, 10 per cent in Group V, 7 per cent in Group VI, 3 per cent in Group VII, and 42 per cent in Group VIII. The appearance in the very highest level of ability of this extremely high percentage of cities with populations from 30,000 to 99,999 is due to the fact that all the cities of this size in both Oklahoma and South Carolina happen to fall in this group, as can be seen in Table 3. This detail is in accord with the opinion expressed by one student of the question that there is a greater difference between the

urban and the rural territory in the South than in any other part of the country.

Cities with populations of 10,000 to 29,999 are distributed from Group II–VIII, inclusive. Cities of 2,500 to 9,999 are represented in all but the richest group. Each of the rural groups of districts—districts in places of less than 2,500 but having ten or more teachers, districts having from two to ten teachers, and districts having only one teacher—covers the whole range of ability.

The outstanding and important fact brought out by these tables is that no accurate prediction of the relative ability of any district to support schools can be made from its size. If the community in question is a city of 100,000 or more, there is a very good probability that it will lie in one of the four wealthier groups, but in none of the states in question did such a city fall in the wealthiest group. Cities with populations of from 30,000 to 99,999 and from 10,000 to 29,999 tend to be in the wealthier groups but a district in any other classification according to size has a chance to fall in any group of ability. The inclusion of data from other states would doubtless change the details of this table somewhat, but the important point—that the ability of a district to support schools does not depend on its size or on whether it is rural or urban—would without doubt be reinforced.

If state funds for education are to be so distributed as to equalize the burden of the support of education, it is evident that any type of district, from the largest city to the smallest district, must be equitably treated whether it is situated near the lower or the upper end of the scale in ability.

What is needed in systems for the allotment of aid is an arrangement whereby each district which is intrusted by the state with the responsibility of maintaining schools, whether urban or rural, small or large, shall receive the amount required to supplement the product of a reasonable, uniform local tax rate up to a point where an adequate program of education can be maintained. The issue is not rural versus urban; it is rich versus poor.

READINESS AND THE ARITHMETIC CURRICULUM

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Properly, the definition of "readiness" as the ability to learn includes *all* aspects of ability. Involved in this ability to learn are the dynamic factors of motivation and the social factors of need. Nevertheless, in this article the term "readiness" is held closely to its purely intellectual aspect since it is in this sense that argumentation and research on readiness have been most largely organized.

What, then, do we know about number readiness, about children's ability to learn arithmetic? The evidence on this problem is of three kinds: evidence from first-grade inventories, evidence from evaluation by testing, and evidence secured from control-group experiments.

EVIDENCE FROM FIRST-GRADE INVENTORIES

The first kind of evidence has been obtained by inventorying the number abilities of children before or just after they enter school. The studies of this kind are those reported by Buckingham and MacLatchy (4), Hildreth (7), McLaughlin (12), Polkinghorne (15), Russell (17), and Woody (31, 32). It is impossible in an article like this to review the separate studies, but a fair summary would be about as follows: Children upon entering Grade I already possess an equipment of number knowledge far larger than we supposed ten years ago. On the average, they can enumerate objects and count by rote to 20 or 25; they can use some of the simpler addition and a few subtraction combinations; they even understand a little about the meaning of fractions. On the other hand, their abilities, for the most part, function satisfactorily only with concrete objects and in concrete settings. Furthermore, these abilities operate clumsily and uneconomically, representing, as they do, low-order or immature procedures.

What are the implications of these studies? One interpretation

is that, since children, on their own, have learned so much about number, they should be allowed to continue on their own for another year or two at least. A second interpretation is that the possession of so large a stock of usable number ideas and skills is proof positive of readiness for direct teaching. The two interpretations point in diametrically opposite directions. The second interpretation requires the immediate introduction of "systematic" instruction; the first, the postponement of such instruction. Both interpretations are extreme, and another interpretation is also possible, as will be shown later.

EVIDENCE FROM EVALUATION BY TESTING

The second kind of evidence on readiness has been secured by measuring the effects of arithmetic instruction when started at various points in the grades. Reference is made here not to control-group experiments but rather to comparisons made between schools in which the arithmetic courses of study have differed materially.

Committee of Seven investigation.—Here belongs the investigation by the Committee of Seven, reported by Washburne in 1928 (23). In this study a battery of tests in various arithmetic processes was given to some five thousand sixth-grade pupils in fifteen cities. About a third of the pupils tested had started arithmetic in Grade I, a third in Grade II, and a third in Grade III. The medians of the three groups indicated that the advantage lay, in eleven of the twelve skills tested, with the pupils who had begun arithmetic in Grade I as compared with the other two groups, and with those who had begun arithmetic in Grade II as compared with those who had begun in Grade III. The statistical reliabilities of the differences cannot be ascertained from the published data, but at least the differences were remarkably consistent. Washburne, after ruling out other possible explanations, concluded that the differences found were real and that they were due to differences in the time at which systematic instruction had been introduced

All things considered, the noteworthy fact about this study is not that the differences found were small but rather that differences were found at all. In the first place, the shifting of school populations over a period of five years would have tended to level away the differential effects of the supposedly distinct learning experiences of

the three groups. In the second place, it is doubtful whether in the years 1922–25 instructional materials were available which could have taken advantage of any differential effects of pre–fourth-grade instruction. That is to say, the chances are that in all fifteen cities standard textbooks were introduced at the beginning of Grade III. If so, it would have been practically impossible to capitalize on the gains, if any, from instruction in Grade I, or in Grade II, or in Grades I and II. Put it this way: the committee's data, collected in Grade VI, almost certainly undervalued greatly the potential differences between the three groups tested.

MacGregor's study.—Another investigation of this second type was published by MacGregor (11) in England in 1934. In brief, MacGregor gave Battery A of the Public School Achievement Test to all the 5,961 pupils in the Fife County public schools whose eleventh birthdays fell in the session 1930–31. Only the results in arithmetic are considered here. In spite of the fact that the Scottish children were relatively unfamiliar with standardized tests and in spite of the fact that they were unduly penalized by several items in the American tests, they surpassed the American norms by some eighteen months in computation and by about fifteen months in problem-solving. MacGregor accounts for the Scottish superiority on the ground of school entrance at five years of age. Possibly, too, in Scotland arithmetic is planned with an eye to real continuity. There the third year of arithmetic may be so closely organized with respect to the first two years as to avoid the break which is found at this point in American schools. As Woody (33) has pointed out, the ultimate explanation for the poorer showing of the American children will be extremely difficult to determine. Whatever the explanation, MacGregor's study is extremely significant for the problem of number readiness. The Scottish children learned arithmetic, not at age six, but at age five; further, they retained their initial advantage through six years of schooling. More than that, MacGregor believes that with appropriate tests this advantage could be shown actually to have increased.

In summary.—To conclude this review of the second kind of evidence on readiness: The investigations of MacGregor and of the Committee of Seven show unmistakably that primary-grade children

are capable of profiting from systematic instruction in arithmetic. There may be reasons for postponing such instruction to later grades, but those reasons can hardly be reasons of readiness. It is *readiness*, and readiness alone, which is here under consideration.

EVIDENCE FROM CONTROL-GROUP EXPERIMENTS

The third kind of evidence, that secured from control-group experiments, has dealt with two phases of the problem: (1) "formal" arithmetic versus postponement and (2) placement of particular topics.

1. "FORMAL" ARITHMETIC VERSUS POSTPONEMENT

The first type of control-group experiment is represented by the investigations reported in England by Ballard (1) in 1912, and in this country by Taylor (20) in 1916, by Wilson (30) in 1930, and by Benezet (2) in 1935–36. In these studies so-called "formal" arithmetic was withheld in the experimental groups, while it was administered as usual in the control groups. At the end of the experimental period the comparative achievements of the two groups were measured. Without exception, the experimenters have recommended the postponement of "formal" arithmetic—Ballard for two years (until age seven), Taylor for one year, Wilson for two years, Benezet for even longer.

The Benezet study.—Just what these studies mean is open to question. The Benezet experiment (2) has not been reported in a manner which encourages confident criticism. Still, it is clear that the effects of two approaches to arithmetic were contrasted: on the one hand, dull, meaningless drill of the traditional sort, begun in Grade I and continued for five years; on the other hand, vitalized, purposeful, but essentially unorganized experiences enjoyed over an equivalent period of years.

In my opinion, this investigation is best regarded as an attack on the aimless, unproductive instruction in arithmetic still too prevalent in the schools. Certainly this interpretation is as valid as is that of the experimenter, who sees in his results a demand to postpone systematic instruction for some years. The Benezet data do not prove that children in the primary grades are unready for *arithmetic;* instead, they show that the children in his control group

were unready for *the kind* of arithmetic to which they were subjected. That is quite a different matter.

Other instructional approaches than the two compared by Benezet are possible. There is, for example, a third approach, which was not investigated by Benezet nor by any of the other three experimenters in this group of four, namely, a program of systematic instruction, beginning in Grade I, which is made up of carefully selected and wisely directed but nonetheless interesting, useful, and meaningful number experiences and which is arranged with a view alike to orderly growth in quantitative thinking and to a more intelligent and happier child life.

The Wilson study.—The Wilson investigation of 1930 (30) did not prove the wisdom of eliminating all arithmetic instruction from the first two grades. As a matter of fact, Wilson proposed nothing of the kind. His report is full of concrete illustrations of live, useful number activities for the primary grades, and it is full, too, of evidence of the real value of such activities in preparing for later abstract arithmetic. Wilson argued not that children in Grades I and II are unready for *arithmetic*, only that they are unready for *a particular kind* of arithmetic.

The Ballard and the Taylor studies.—The English study by Ballard (1) and the better-known American study by Taylor (20) are both subject to the criticism already made with respect to the Committee of Seven investigation. Buckingham (3) has stated this criticism to good effect. According to Buckingham, the control group, taught as usual in Grade I, must have learned *some* arithmetic and consequently must have started Grade II with an advantage over the untaught experimental group. Failure to maintain their advantage is explicable on grounds of *undifferentiated* instruction. Says Buckingham: "If the same energy and resourcefulness [had been] devoted to the taught group as to the untaught group during the third grade, it is probable that the two groups would [have been] wider apart at the end of the year than they were at the beginning of it" (3:343).

In summary.—These four control-group experiments are in substantial agreement in concluding that the older type of arithmetic instruction must be banished from the lower grades and that children of the ages of six and seven, at least, are incapable of learning (they

are *unready* to learn) abstract arithmetic when presented through the usual mechanical drill techniques and devices. On the other hand, they agree that primary-grade children can learn (are *ready* for) much arithmetic when that arithmetic is met incidentally and informally in the service of their needs.

None of the four investigations has tested a third instructional approach—an approach no less systematic than intermediate-grade arithmetic now is but at the same time no less useful, meaningful, and attractive than the arithmetic of incidental experience.

2. PLACEMENT OF PARTICULAR TOPICS

There is another type of control-group experiment on readiness: the type designed to determine readiness for specific arithmetic processes. Many studies relating more or less directly to readiness fall in this category,[1] for example, those on the comparative difficulty of long and short division made by Grossnickle (6), John (8), Johnson (9), and Olander and Sharp (13). By far the best known are the extensive and the long-continued investigations of the Committee of Seven (5, 14, 16, 18, 19, 22, 24, 25, 26, 29).

Committee of Seven investigations.—The results of the investigations by the Committee of Seven were first reported in 1930 in the Twenty-ninth Yearbook of the National Society for the Study of Education (22) and have since appeared in other places.

The general pattern of the experimental procedure employed by the committee is probably familiar to the reader. The usual grade placement of such a topic as the multiplication of fractions was determined through a comparative analysis of courses of study. Arrangements were then made with co-operating schools to teach this topic in three grades: the usual grade and the grades immediately preceding and following the usual grade. Intelligence tests and foundations tests, covering the skills requisite to learning the new topic, were administered. Instruction then followed according to plans supplied by the committee. A careful attempt was made to control such matters as time of day, length of the arithmetic period,

[1] Here also, except for space limitations, might properly be mentioned the many investigations which have shown instructional procedures to be successful or unsuccessful because of their peculiar demands on pupils. A case in point is McConnell's study (10) of two methods of teaching the simple number facts.

and so on. During the course of the teaching, at its close, and six weeks later, tests were given to measure achievement. The data were then treated to discover the particular mental age at which the given arithmetic topic could be taught most economically. That mental age was adopted at which at least three-fourths of the children could show 80 per cent mastery as revealed in the retention test. Employing this criterion, the committee recommended that the process of subtraction be taught at the mental age of eight years and nine months, compound multiplication at twelve years and four months, division of fractions at twelve years and three months, and so on. This review, brief but I hope not unfair, must suffice for the purposes of this article.

It was my original intention in this article to criticize fully these later investigations of the Committee of Seven. The limitation of space makes such treatment impracticable. Instead, I can but present in a bare sentence or two the principal reasons that I see for objecting to the committee's proposals.[1]

My objections are four in number. The first two have their origin in the committee's experimentation and, I believe, are crucial enough to prevent adoption of its recommendations.

In the first place, the committee's mental-age standards, being based on a single instructional program, can be safely accepted only for situations where this program is also accepted and is followed exactly. Deviations in time allotment for arithmetic, in the materials and the methods of teaching, in the number of weeks spent on topics, or in any other aspect of instruction may be expected to make these standards of doubtful value.

In the second place, the general validity of the committee's conclusions is a direct function of the suitability of the tests employed to secure those conclusions. But one of these tests has been published: the subtraction test printed in the Twenty-ninth Yearbook. If the other tests were constructed as was this one, little confidence in the committee's conclusions is justified.

In the third place, the conception of readiness logically required

[1] These objections will be developed and defended in the writer's article, "A Critique of the Committee of Seven's Investigations of the Grade Placement of Arithmetic Topics," to be published in a later number of this journal.

by the committee's recommendations for the separate processes is unsound psychologically and is likely to be misleading educationally. Readiness seems to be viewed as the result of some inner maturation, not as the product of experience. Thus the effects of merely growing older tend to be exaggerated, and the influences of experience and direct instruction tend to be minimized.

In the fourth place, overconcern with matters of grade placement diverts attention from more basic issues. Changing the time for teaching particular processes can solve few of the problems. The need is for a fundamental reorganization of instruction from bottom to top.

CONCLUDING STATEMENT

I want to conclude on a positive, not a negative, note. Elaboration of the last sentence of the preceding paragraph makes it possible to do so. What is this needed fundamental reorganization of instruction?

Its outlines are already clear in the work being done with primary-grade arithmetic. Instead of postponing topics—the easy way out—new ways are being sought to teach the content still somewhat generally assigned to Grades I and II. Efforts of this kind are more than justified by the research that I have summarized, which shows that children in Grade I can learn arithmetic. Changes in instruction are being made in order to take the fullest possible advantage of this readiness. The plan is to translate some of the abstract arithmetic of later grades into an intelligible body of concrete number experiences for children in the first grades. That the plan is workable has also been amply demonstrated by research, some of which has been cited in this article. It seems to be workable whether the basis is found in the social uses of number, as stressed by Wilson (30), or in the better understanding of arithmetic as such, as emphasized by Thiele (21).

The same kind of reorganization is probably feasible in the higher grades. Changes in the placement of content—only part of the problem—should be made only as reorganized instruction shows need for the changes. The multiplication of fractions, for example, can be analyzed; the easiest and simplest concepts and skills can be moved lower in the grades at the same time that the hardest aspects

of the topic are moved higher. According to this plan, instruction in the multiplication of fractions may be thought of as beginning in Grade I and continuing without a break into Grade V or Grade VI. The learning is continuous, uninterrupted; each stage develops readiness for the next. The aids available from related experience make their contribution to the general movement toward mature, intelligent grasp on the quantitative in life.

To achieve such an instructional reorganization in arithmetic is a research program which can challenge the best efforts of all educators.

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GRADE PLACEMENT OF CHILDREN'S BOOKS

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"Every teacher has to face the problem of fitting reading material to children's reading ability. Any attempt in the past to give children suitable material has been largely a matter of guesswork. An objective method of determining what material is appropriate for children of given reading ability is needed by classroom teachers. Similarly, in selecting textbooks and supplementary-reading material, the superintendent or supervisor should have a means of knowing whether the books are within the reading grasp of the children for whom they are intended. The writers of textbooks and other books for children need to have an objective method of determining whether their vocabulary and sentence structure are such as will offer no serious obstacles to the children who are to read what they write."

So began an article by the present authors in the January, 1928, issue of the *Elementary School Journal*.[2] The article went on to describe the derivation of a formula, based on several years of research, for the effective grading of children's books. Since that time we have continued the research, broadened its base to include books for children in the primary grades, refined our methods, tried out many variant formulas, and arrived at a more satisfactory and more useful formula and an easier technique for applying it. We have then proceeded to apply it to more than two thousand books, most of which have been selected by a committee of expert children's librarians, chosen by the American Library Association, and have pub-

[1] During the years 1929–32 Vivian Weedon, now of the Bureau of Educational Research, Ohio State University, took over much of the work which prior to 1929 was, and since 1932 has again been, the responsibility of Mrs. Morphett.

[2] Mabel Vogel and Carleton Washburne, "An Objective Method of Determining Grade Placement of Children's Reading Material," *Elementary School Journal*, XXVIII (January, 1928), 373–81.

lished the result in a volume called *The Right Book for the Right Child.*[1]

The first part of the present article deals with the improvement of the formula; the last part deals with its application.

Since the basis of the earlier formula was the study of what children read and enjoy at various levels of reading ability from Grade III through Grade IX[2] and since that study was also one of the two bases of the present formula, let us recapitulate briefly that earlier study.

To children—36,750 in all—attending a wide variety of schools in a wide variety of locations was administered the paragraph-meaning section of the Stanford Achievement Test. The children were asked to fill out ballots on all the books that they had read during the school year. About a hundred thousand ballots were turned in. These were assembled by book titles, and the median reading grade of the children who liked each book was taken as the grade in which the book belonged. Various checks on the validity of this assumption proved it to be sound, except that, as Shuttleworth subsequently pointed out,[3] the relatively small numbers of ballots received at the upper and the lower extremes tended to skew the grading of the books at these extremes toward the middle grades. This skewing was not taken account of in the earlier formula.

One hundred and fifty-two of the books on which large numbers of ballots had been received, these books being spread with respect to difficulty from Grade III to Grade IX, were analyzed in minute detail, and each element of vocabulary, sentence structure, paragraph length, etc., was correlated with the reading grades of the children liking the books. The best correlations were combined in a regression equation to yield the 1928 formula.

This formula was made up of four elements: number of different

[1] Mary S. Wilkinson, Vivian Weedon, and Carleton Washburne, *The Right Book for the Right Child.* New York: John Day Co., 1933 (revised in 1936).

[2] Carleton Washburne and Mabel Vogel, *Winnetka Graded Book List.* Chicago: American Library Association, 1926. Published in 1929 by Rand McNally & Co., under the title *What Children Like to Read.*

[3] Frank K. Shuttleworth, *A Critical Study of Two Lists of Best Books for Children.* Genetic Psychology Monographs, Vol. XI, No. 4. Worcester, Massachusetts: Clark University, 1932.

words in a sampling of one thousand; number of "uncommon" words in the same sampling, "uncommon" being defined as not included among the ten thousand commonest in the Thorndike list;[1] number of prepositions among the thousand words; and number of simple sentences among seventy-five sample sentences. Each of these elements was duly weighted in the formula.

That formula had certain faults. First of all, it shed no clear light on the grading of books for use in Grades I and II. In the second place, it required a preposition count which, seemingly simple, proved in practice to be surprisingly difficult (many prepositions are very hard for anyone not an expert grammarian to identify). Third, there was no chart form to simplify the application of the formula, and the fact that any of the ten thousand commonest words were considered common made such a chart as will be described later impossible. Finally, the formula did not allow for the skewing due to a smaller number of ballots in the upper and the lower extremes of the original list and therefore rated primary books too high and eighth- and ninth-grade books too low.

To remedy the first defect was most important and most time-consuming. We had to discover what constituted first-, second-, and third-grade books. Our technique for Grades III–IX was not applicable: first- and second-grade children could not fill out ballots; their choice of books was usually only among those supposedly of their own grade level; they were still too much involved in learning the mechanics of reading to be able to discriminate among books. Yet we wanted direct, objective, children's experience as a base rather than teacher judgment. The method finally evolved is briefly described in the following paragraphs.[2]

A number of experienced primary teachers were asked to submit lists of easy and hard first-, second-, and third-grade books with which they had had experience within two years. The books on

[1] Edward L. Thorndike, *The Teacher's Word Book*. New York: Teachers College, Columbia University, 1921.

[2] For a full account of this method and all other matters involved in the derivation of the formula, and for a comparison of its effectiveness with formulas suggested by others, the reader is referred to the monograph entitled *Grading Children's Books* by the present writers, to be published by the National Conference on Research in Elementary School English.

which there was the best agreement were tentatively selected as typical books for trial with the children. Primary children were then tested with the Gray Standardized Oral Reading Paragraphs and the Gates Primary Silent Reading Tests. Children whose scores on both tests fell nearest to the median of their half-grade were selected as subjects on whom to test the books. Each of these test children read measured sample selections from the typical books. Their time and errors were recorded. The median time and error score for each half-grade was thereby found.

By having children of a half-grade higher and a half-grade lower read the same books, we found the difference in time and error scores from half-grade to half-grade and could thereby determine whether books were really a half-grade apart in difficulty. With this information we were able to narrow our "typical books" down further. Any book which varied in difficulty (as measured by children's time and error scores) by more than a quarter of a grade from the median of all the "typical books" of a given half-grade was discarded—obviously it was closer to the half-grade higher or lower than that to which it had been assigned. Many children and many more books had to be tested before we finally obtained a group of strictly typical books for each half-grade—books which were a half-grade apart in difficulty as shown by the reading time and errors of children typical for their grade in terms of standardized reading tests. These books were also, of course, among those selected as typical for the half-grade by skilful and experienced teachers. They formed our "Basic Primary List."

The books in the "Basic Primary List" were analyzed in much the same way as were those in the original *Winnetka Graded Book List* except that we confined ourselves to a study of those elements which had previously shown helpful relationship to grading. We also restudied the books included in the *Winnetka Graded Book List*, particularly from the standpoint of "uncommon words," trying to see whether the best correlations were obtained by counting as "uncommon," words which were not included in Thorndike's commonest 10,000 (as in our original formula), or words which were not among the 5,000 or 1,500 or 1,000 or 500 commonest words.

It is not necessary here to explain in detail how we finally de-

termined the best combination of elements for the making of the formula. Suffice it to say that after many trials and much study we found a combination which gave us a high correlation (.86) with grades all the way from the first to the ninth, which corrected the skewing of the *Winnetka Graded Book List*, and which was simpler than the earlier formula and predicted with satisfactory accuracy the degree of reading ability needed by children to read a given book with pleasure. The probable error of estimate was 0.8 of a grade—as close as could be desired or warranted.

The three elements that go into this new formula are simple:

1. In a thousand words, from a systematic sampling of the book, how many different words are there?

2. Of this same thousand words, how many are not among the 1,500 commonest in the English language?

3. Out of seventy-five sentences, sampled systematically, how many are neither complex nor compound?

These are combined in a regression formula as follows:

Number of different words in 1,000 multiplied by .00255,
Plus number of different uncommon words in 1,000 multiplied by .0458,
Plus a constant: 1.294,
Minus number of simple sentences in 75 multiplied by .0307,
Yields the grade of reading ability necessary for satisfying reading of the book.

Perhaps this formula will be a little more intelligible if it is applied to a book: *Tom Sawyer*, for example:

Number of different words in 1,000	= 373 × .00255 =	0.951
Plus: Number of different uncommon words in 1,000	= 117 × .0458 =	5.359
Plus: Constant		1.294
		7.604
Minus: Number of simple sentences in 75	= 18 × .0307 =	.553
		7.051

Tom Sawyer can be easily read, therefore, by a child with a reading ability of grade 7.1. Practically, this figure means that the book is suitable, as far as difficulty is concerned, for children of seventh-grade ability or higher.

It will be noticed that the two major differences between this and the earlier formula are that this omits the preposition count and that it uses as a criterion for the commonness of words the 1,500 commonest words in the English language instead of 10,000. The preposition count was omitted for simplification and ease in applying the formula and, as the formula finally worked out, no material

COMMONEST WORDS						UNCOMMON	
count	earn not ing	fit	grave not n	inch	lion	A	
country	earth	five	gray not gray	include	lip		
course	east	fix	great	increase	list		
court	easy not er, ly	flag	green	indeed	listen		
cousin	eat	flame	great	Indian not India	little		
cover	edge not ing	flash	grew	inside	live not ly		
cow	effect	flat not en	ground	instead	load		E
cream	egg	flesh	grow	intend	lock		
creature	eight	floor not ing	guard	interest	lodge not ing		
creep	either	flour	guess	into	London		
cried not ed, ed, ely	elect	flow not n	guest	invite	long		
crop	else	flower	guide	iron	look		
cross	employ	fly not ed	gun	is	loose not n		
crowd	empty	fold		island	lord		
crown	end not ing-nown	folk	H	issue	lose		
cruel	enemy	follow		it	loss		
cry not d, ed, n	England	following	had		lost		
cup	English	fond	hair	its	lot		
curtain	enough	food	half not ves	itself	loud		
custom	enter	fool	hall		love		
cut	entire	foot	hand	J	lovely		
	equal	for	handle		low not ly		
D	ere		hang	jack	lower		
	escape	force	happen	James	lying	B	F
dance	especial	foreign	happy not ly	January			
danger	establish	forest	hard	John	M		
dare not ing	Europe	forget	hardly	join			
dark	even	form	harm	journey	machine		
darkness	evening	former	harry	joy	mad		
dash	event	forth	harvest	judge	made		
date	ever	fortune	has	July	maid		
daughter	every	forty	haste not n	jump	mail		
dawn	everything	forward	hat	June	main		
day	evil	fought	hate	just	make		
dead not ly	exact	found	have	justice	man		
deal not ing-nown	example	four	hay		manner		
dear	excellent	fourth	he	K	many		
death	except	fox	head		map		
debt	exercise	frame	health	keep	march		
December	expect	France	hear	kept	mark		
decide	experience	free	heard	key	market		

FIG. 1.—Segment of the word count chart (greatly reduced) of the Winnetka Chart for Determining Grade Placement of Children's Books.

difference in accuracy resulted. The change to the standard of 1,500 words, instead of 10,000, for commonness of words doubtless resulted from our including primary books; their words must be much more simple than those of the upper grades. The other differences are found merely in the constants by which the different factors are multiplied. These were derived by the usual regression-equation technique and take account of the influence that each factor has on the grading of the book.

In order that the application of this formula might be made as easy as possible, a chart was devised, patterned somewhat after the

Lewerenz chart.[1] Two segments of the Winnetka chart[2] are reproduced in Figures 1 and 2 in greatly reduced type. The chart itself is 21 by 28 inches in size. On one side it contains the 1,500 commonest words in the English language, alphabetically arranged and with space after each for tallying the number of times it occurs. On the right-hand side of the same page, under letters of the alphabet, are blanks in which can be written the "uncommon" words found in a thousand-word sampling and a space to tally the frequency of oc-

DIRECTIONS FOR GRADING A CHILDREN'S BOOK

To determine the degree of reading ability a child must have to read a given book it is necessary (I) to select 1000 sample words scattered through the book; (II) to tabulate these words on the other side of this sheet; (III) to find how many of these words are different from each other (called "Number of different words"); (IV) to find how many of these words are not included in the 1500 commonest words in the English language (called "Number of uncommon words"); (V) to select 75 sample sentences scattered through the book; (VI) to tabulate these sentences as simple or not simple; and (VII) to combine these results in a formula. The outcome is the school grade to which a child's reading score on a standard test should correspond if he is to read the book easily and with interest.

Detailed directions for each of these seven steps follow:

Step I - Selecting the 1000 sample words.

1. Find the number of pages in the book, omitting preliminary pages (title page, preface, etc); pages containing pictures only; and pages containing less than one complete sentence of prose. Record number in space provided in upper right hand corner of this chart.

FIG. 2.—Segment of reverse of the Winnetka Chart for Determining Grade Placement of Children's Books.

currence of each of these. Below this list is a place to enter the number of different uncommon words and the number of different words, both of which are needed in the formula.

On the other side of the chart are detailed directions for the tallying of the words, telling what to do about derived forms and so on; detailed directions for selecting the sample words and sentences; detailed directions for recognizing simple sentences; etc. There is also space in which to record, for the seventy-five sample sentences, whether each is simple or not simple in accordance with the definition given on the chart.

[1] Alfred S. Lewerenz, Vocabulary Grade Placement Formula: Word Tabulation Sheet. Los Angeles, California: Educational Research and Guidance Section, Los Angeles City School District, 1931.

[2] Winnetka Chart for Determining Grade Placement of Children's Books. Winnetka, Illinois: Research Department, Winnetka Public Schools.

Blanks for copying in the totals of each of these elements, combined with the constant and the formula, are also provided on this same chart. The chart makes it possible for any person of ordinary intelligence to analyze any book and determine its grade placement. For a novice the job is a long one. Four or five hours would probably be required for a person's first analysis of a book. As one becomes familiar with the chart, however, and does not have to refer constantly to the directions, the time needed diminishes to about two and a half or three hours. The Research Department of the Winnetka Public Schools has set up a book-analyzing service for schools, authors, and publishers and will analyze any book at cost (about $1.50). Persons who are going to have only a small number of books analyzed will probably find it more economical to avail themselves of this grading service. Those who are going to do a great deal of grading might well learn to apply the technique themselves.

After this formula had been derived and had been found, by application to books of known difficulty, to have satisfactory validity, we asked the American Library Association to appoint a committee of expert children's librarians to work with us in picking out the best available books for children so that these might be graded by the formula. A foundation grant was secured to take care of the expense of the grading and the detailed editing. Mary S. Wilkinson, director of work with children in the Enoch Pratt Free Library of Baltimore, Maryland, was appointed chairman of the committee. Serving with her were Nora Beust, assistant professor of children's literature in the School of Library Science, University of North Carolina; Bertha Hatch, librarian for the School of Education, Western Reserve University, Cleveland, Ohio; Louise Singley, director of work with children in the public library at Kalamazoo, Michigan; and Elizabeth Riddell White, director of the Department of Libraries of the Long Beach City Schools, Long Beach, California. Miss Helen Martin, of the School of Library Science, Western Reserve University, Cleveland, Ohio, was an original member of the committee. Her work in Europe made necessary her resignation. Co-operating with this committee were twenty other well-known and competent librarians, who served as a subcommittee to check the selections of the main committee and to annotate the books.

Each of the five members of the committee was requested, from her extensive experience with books and with children, to pick out those books found to be most interesting and most suitable to children's reading from the standpoint both of content and of literary quality.

The method used in selecting and compiling the books is described as follows by the chairman of the committee, Mary S. Wilkinson:

Each member of this special committee compiled, independently, a list of approximately five hundred titles. These were combined and the results, showing considerable variability, were submitted to the committee. Discrepancies and disagreements were corrected, and the whole began to take shape in the desired form—namely, three groups showing first, second, and third choices for libraries of 500 (Group One), 1,000 (Group Two), or 1,500 (Group Three) titles, respectively.

Not satisfied even then that serious omissions had not been made, a supplementary committee of twenty children's librarians, responsible for annotating the titles, was asked to check the list as a whole. Improvements were suggested and adopted. . . . .

In selecting titles the committee has tried to bear in mind that the books are to provide recreational reading rather than supplementary school material, hence many useful textbooks have not been included. They also had to consider that the books were planned for children *to read to themselves* between first and eighth grades. With the limits imposed by the length of the list, it has been deemed unnecessary to include more of the work of any writer, no matter how good, than will serve to introduce him adequately. Certainly some of the decisions as to inclusions and grouping have been arbitrarily made, but it is hoped that in the final analysis the selection will justify the effort and the faith that have gone into its making.

In recommending editions, the committee put three questions to themselves:

"If price were not a factor, which edition should I choose first?

"Which second?

"If limited in my funds, which edition should I buy?"

The arrangement of the list follows to a large extent the recommendations made by Miss Helen Martin based on a questionnaire study in which Miss Martin asked a number of library people if they felt the need for such a list and, if so, how they would like it arranged.

The author and title entries follow the *United States Catalog*. Miss Rosette Reese, librarian of the Skokie School, Winnetka, Illinois, was responsible for this part of the work.[1]

[1] Mary S. Wilkinson, Vivian Weedon, and Carleton Washburne, *The Right Book for the Right Child*, pp. xii–xiii. New York: John Day Co., 1933.

To these carefully selected books the Research Department of the Winnetka Public Schools applied the formula.[1] The result was a fully indexed volume of 357 pages, usable by teachers in selecting books for their libraries or in recommending books to individual children; usable by librarians; and usable by parents, both in recommending books for their children to borrow from the library and in selecting books to buy for the children's personal libraries.

Such a book list, however, rapidly becomes out of date. A wealth of new books is coming on the market every year. It has been the intention of the authors and the publishers to keep the book list fairly well abreast of the times. Consequently a supplement of 144 titles was published in 1936. These titles would presumably have been included had they been available at the time that the original book list was compiled. It is hoped that a similar supplement will be issued two or three years hence or that the entire book list will be revised to include books published in 1937, 1938, and 1939. Of course, for the bulk of the books such a list is never out of date. *Tom Sawyer*, *Little Women*, *Heidi*, *Treasure Island*, and hundreds of others are as popular today as they ever were, if not more so.

Through this combination of selecting books on the basis of the wide experience of expert children's librarians and grading them on the basis of careful statistical research, it is hoped to keep available for parents, teachers, and librarians a list of books known to be suitable to children at various levels of reading ability. Through devising the formula and publishing the chart for application of the formula, we have tried (1) to make it possible for writers and publishers to check the difficulty of their manuscripts so that they can fit their works to the ability of the children whom they wish to reach and (2) to make it possible for schools to evaluate the difficulty of books that they contemplate using.

Children cannot be expected to learn from books which are so written that the mechanical difficulty of reading them occupies the center of the children's attention. It is only by giving children plenty of reading at their own level of ability that fluency and a real love of reading can be developed.

[1] The formula as given earlier in this article had not yet reached its final form when the books were graded. The constants used varied slightly from those given in this article. The final formula as given here was used in grading the books in the 1936 supplement to *The Right Book for the Right Child.*

GOODBYE LAISSEZ FAIRE IN EDUCATION

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There is no need for apology or alarm if the title above seems as appropriate for a popular anthem as for a serious article. Obviously it has promising possibilities for either purpose. It is chosen here because it accurately suggests a theme that has pursued the writer persistently in recent years, floating into his mind and out like the haunting lines of a familiar refrain. It represents the mental residue from many discussions, with students and others, of a fundamental problem, after much of the surplus verbiage has been cleared away. The problem is precipitated by the doctrine of the radical wing of the "progressive" group in education. It will be discussed in language not unduly burdened with the weight of polysyllables.

The desirable school squarely faces the problem of discipline because it recognizes the necessity of some limitation of personal freedom or interest. He who believes in an environment not of the individual's creation, in a truly external manifold of independent entities in relation with which the personality must function, keeps steadily in the forefront of his thinking two fundamental considerations: the complex entity known as the individual personality and the vast organization of objects constituting its environment. The environment becomes the source of many demands on the individual, of many limitations of the possibility of action. By its very nature it facilitates certain types of reaction and inhibits others. What the personality can do is determined in part by its own purposes and in part by the manner in which the surrounding world concurs. To declare in accents amorous, "I want to marry you," is a necessary preliminary to matrimony. To obtain an acceptance is quite a necessary additional detail.

The point of the preceding statement is set forth with singular clearness by William Lyon Phelps in the following paragraph.

One of the best Christmas presents the world ever received was Isaac Newton, born Christmas Day, 1642. He formulated the law of gravitation, a law which does not make anything happen but which describes how things do happen. *Every body attracts every other body by the product of the weight and inversely as the square of the distance.* Why? Nobody knows. Why the square of the distance? Nobody knows. But such are the facts, and all the dwellers on the earth do well to accommodate their lives to this part of the Scheme of Things.

It is perhaps strange, in these days of self-expression, that someone does not announce that he does not intend to obey the law of gravitation; and in order to demonstrate his independence, he will at a certain advertised moment jump off the top of the Empire State Building. The greatest skeptic and the greatest believer in self-expression know what would happen: one more fool would be eliminated, and the law of gravitation, the Scheme of Things, would remain unaffected.[1]

It is easy to see, too, that the controversy in regard to incidentalism as opposed to guidance raises the same general question. Incidentalism is a procedure in accordance with which educational values are expected to be realized by the pupil in the natural pursuit of his immediate interests. Guidance represents a healthy mistrust of the dependability of such interests. Educational guidance is supplied by a teacher, but, if the teacher is properly qualified, the guidance is not an arbitrary matter. What is its basis? Broadly, its basis is the cultural tradition—patterns of achievement based on those accomplishments of human personality that have proved of most worth, the most precious products of civilized life, our best institutional inheritance. This cultural tradition, with its knowledges and skills, its customs and laws, its manners and conventions, its attitudes and appreciations, represents the best solutions up to date of the typical problems confronting humanity. The teacher properly equipped for the guidance function is supplied with these solutions as she watches the child confronting a situation in wonder, puzzlement, or dismay. She even manages purposely to put the child in the presence of the problematic. She permits her charge to solve the problem if he can, but she does not tarry until an ordinary or even a brilliant youngster rediscovers the law of gravitation or the binomial theorem. She knows too well how long men stolidly waited in darkness for Newton, and she suspects that the pupils before her

[1] William Lyon Phelps, "The Scheme of Things," *Good Housekeeping*, CIII (December, 1936), 39.

are probably not reincarnations of that distinguished gentleman. She recognizes that what the race was years in achieving can often be acquired by the properly directed pupil in a few minutes, hours, or days, and so acquired that the learner lives thenceforth at the loftier intellectual level established by a predecessor who first solved the problem for humanity. She does not, however, deny a pupil the thrill of personal discovery where it is possible and practicable, the opportunity to learn the way a thinker thinks.

It should now be obvious that the facts and truths of studies, which constitute the central element in the social inheritance referred to, have their origin in the content of human experience. They are selections of the thought-process; they are abstractions and generalizations from the greater fulness of the perceptual offering; they are items of content and their interrelations. This origin being admitted, another question calls insistently for an answer: What is the source of the perceptual offering? A consistent Deweyism answers: The offering is produced by the thought-process; it is manufactured by the mind; it is the mysterious outcome of intellectual creativity. Expressed in the language of a well-known literary dreamer, "It is we who make it; and when there are no longer any men there will no longer be any universe."[1] This theory, however, is denied by realist and scientist alike, and is contradicted by the intuitions of common sense. For scientist, realist, and more common mortals, the material of knowledge is a gift, a presentation, if you will, of an external and pre-existent world. Ideas are "projects" of the mind of man, but not so the existents to which they intentionally refer. Transcending the experience of any given moment is an external world, says the realist, elements of which enter and leave this experience, supplying the original content of mental life. If the meaning of an idea conforms with existents *found* in the perceptual process, the idea is said to have the quality of truth. The classics, about which Hutchins is so eloquent, are repositories of such tested insights. The curriculum of the schools represents an attempt to select the portions of this great tradition most valuable for the guidance of life-activities.

[1] Anatole France, "The Chief Influences of My Career," *Forum*, XCV (March, 1936), 146.

When the elements of this tradition are organized in some logical manner, are systematically assembled according to some principle of coherence, the result is a subject of study. All subjects, I have said elsewhere,[1] are admittedly abstractions. The best headway in thinking is not made by looking at things en masse. True, that is the way the study of any new topic is begun, but scholars have progressed by concentrating now on the quantitative relations of things, now on the relations which exist among the atoms of different elements, now on the relations which the celestial bodies maintain one to another. They have pursued the method of systematic analysis. Man has come to his present intellectual estate by studying the world now mathematically, now chemically, now astronomically. Moreover, if the route of discovery blazes the route of instruction, the pupil must sooner or later immerse himself in the important subjects, those coherent compilations of related material dealing with special aspects of the world. The educator should, however, avoid the mistake of expecting the last steps in the organization of adult thought to be the first for the child. He should just as carefully avoid the mistake of permitting the child, for want of defensible objectives, to dissipate his energy in a sand pile. Properly selected problems and projects will have a place in mediating between the child's present experience and the more mature experience represented in the generalizations of subjects.

The project as an act of purposing on the part of the pupil fits into this picture perfectly. In order of development, the problem, in everyday experience and in the process of learning, leads the way. Then comes ideation with its attribution of possible "what's" to the problematic "that." Purposive action is nothing more than the identification of the personality with one of the ideas or plans of action "projected" in the process of thought. It is a selection or an adoption from several alternatives. Thought, of course, is nothing additional to all this; it is simply a name for the idea formation described. The correctness or the incorrectness of the idea is determined by conformity with its object, and thus piecemeal is truth evolved. The central business in intellectual education is to direct

[1] Frederick S. Breed, *Classroom Organization and Management*, p. 248. Yonkers-on-Hudson, New York: World Book Co., 1933.

the activities of the learner so that he will come into mental possession of the important elements of the truth tradition, the most valuable subject matter available; that he will be able to use the elements of this tradition as means to a more abundant life; and that he will have had enough practice in the technique of thinking to become a problem-solver himself. Through activity the pupil both acquires and applies ideas. The method of acquisition will differ according to brilliancy of mind. Some individuals will accept the discoveries of others; some will make discoveries of their own. Thus the knowledge emphasized, the subject matter regarded as important, the content of an acceptable curriculum, will consist primarily of ideas verified in the process of human intellection, a process in which, as was earlier suggested, man proposes but nature disposes.

When a personality proposes, plans, or projects an activity in the furtherance of an interest, it formulates an idea that is subject to the approval of the world without. Education of the proper sort reduces the hazards of response to the problematic situations of life by providing ideas, conceptions, that have been tried by others and have not been found wanting. Shall the aim be to equip the next generation in such a way that it can avoid the recurrent pitfalls of experience or to teach in such a way that humanity is doomed to repeat the errors of previous generations endlessly? The philosophy of the radical educator is deceptive and dangerous, for it spreads the propaganda that salvation lies within. Salvation also lies without. It comes when prayers are answered.

Skepticism is said to be a mark of intelligence, but, carried to excess, it is a mark of feeble cerebration. To know is to believe, and to believe involves a general hazard, truly. All beliefs are not equally hazardous, however. Some, on the contrary, have a high degree of certainty. The outer world offers confirmation with regularity when action is guided by the belief that oxygen supports combustion, that hydrogen is an inflammable gas, that zinc dissolves in sulphuric acid, that chlorine is heavier than air, and that a small dose of potassium cyanide can reduce the brain of the wildest skeptic to a state of numbness never previously approached. Thousands of scientific beliefs, known currently as truths, are doubted at a terrible risk. Unfortunately these truths are too largely still in the fields of physical

and biological science, while social science languishes in much uncertainty. Political and economic prescriptions doubtless hedge our lives about with much unreason. God is still sadly misinterpreted by hosts of ardent self-appointed spokesmen, and all the ways of the tribe, from Washington to Roosevelt, can hardly be accepted with the certainty of divine inspiration. This is not to say, however, that the relative theory of truth and the theory of anarchy are identical twins, even if certain intellectuals lean dangerously toward anarchic chaos in fear of clogging the springs of human spontaneity. The objective relativist is not moving in the direction of chaos but in the direction of progressive organization. That which bears the brand of truth today may relinquish it tomorrow, but until tomorrow it must serve as the standard of belief. It will therefore serve as material for the curriculum of the schools and the legislation of the state. It will be taught and used for precisely what it is: the best idea up to date.

In the main corridor of Blaine Hall at the University of Chicago there is a bronze bust of Colonel Francis W. Parker, under which is graven the fitting legend, "True education frees the human spirit." Some years ago a graduate student, making his uncertain way into the School of Education, glanced at the legend, missed the connection with the life of Parker, and read it seriously: "True education freezes the human spirit." *Free* and *freeze:* two hostile aims stated with exquisite brevity. At one extreme, skepticism and chaos; at the other, dogmatism and organization; between them, the truly liberal view, the middle-of-the road position. Liberalism escapes the paralysis of skepticism by taking action according to the evidence, modifying action as better evidence is disclosed. It stands for something definitely but not necessarily indefinitely. It believes in ideals, objectives. It avoids dogmatism like a dread affliction of the spirit. Its purpose in education is not to make disciples but to make discoverers. In sum, it represents a philosophy of education and of life that is nothing more intricate than an extension of the scientific attitude and method.

It is not presumed, however, that the more radically inclined will look on this doctrine with composure. Building consistently on the theory of creativity but outdoing Dewey in their educational em-

phasis, they magnify the sanctity and power of personality to such an extent that the restrictions of the external world, social and physical, seem dangerously ignored. "If man is the creator of his world, who shall stay his hand?" they ask, with a logic that can be answered only by impugning the fundamental assumptions on which they build and turning toward the realistic intuitions of common sense. The realistic liberal as consistently casts the gravest doubt on this notion of the supremacy of man. He regards it as an egregious error of emphasis, a gross exaggeration. He makes of personality less a dictator of its destiny, more a democratic spirit that discovers its way of life in co-operation with external "forces." He looks on the educational policy of the radical as a dangerous invitation to indulgence, as founded on nothing more substantial than the flattery of human hopes. Educationally, politically, and morally, he regards this policy as an invitation to disaster. It represents, he believes, an inadequate sense of fact, a false conception of freedom, and an irrational abrogation of discipline. When still a young man, William James, writing to his friend Henry Bowditch, said significantly: ". . . . and however erring men's ideas may be, so long as they admit the existence of *discipline* in life, of something external really existing, which it is the duty of a man to bring his will into harmony with, there is hope for him, and you feel secure in his presence."[1]

The popularity of discipline has measurably declined since the early days of William James, for he labored in the wake of a Puritan tradition still strong and influential. Nevertheless the "whoopee" era in American schools and social life is drawing to a close. The period of educational license, of flaming youth and rabid individualism, is being terminated with a vengeance by the American masses. They have tasted the fruits of this philosophy and have found them intolerably unpalatable. Speak of this trend as the recrudescence of Puritanism, if you must, and seek to damn it with a designation that suffers from the dross still mingled with the gold. Nevertheless it is the lasting essence of Puritanism that emerges as one of the most significant developments of our time. The old world, staggering from

[1] Ralph Barton Perry, *The Thought and Character of William James*, I, 296. Boston: Little, Brown & Co., 1935.

its recent debauch, now rubs its eyes as it painfully recovers in the cold, gray dawn of the morning after and promises penitently to take its liquor hereafter like a gentleman.

The seekers after perfect freedom are, of course, visionary and deluded folks. Says Bertrand Russell:

> Freedom, in education as in other things, must be a matter of degree. Some freedoms cannot be tolerated. I met a lady once who maintained that no child should ever be forbidden to do anything, because a child ought to develop its nature from within. "How if its nature leads it to swallow pins?" I asked; but I regret to say the answer was mere vituperation. And yet every child, left to itself, will sooner or later swallow pins, or drink poison out of medicine bottles, or fall out of an upper window, or otherwise bring itself to a bad end. At a slightly later age, boys, when they have the opportunity, will go unwashed, overeat, smoke till they are sick, catch chills from sitting in wet feet, and so on. . . . . Therefore one who advocates freedom in education cannot mean that children should do exactly as they please all day long. An element of discipline and authority must exist; the question is as to the amount of it, and the way in which it is to be exercised.[1]

This, I am constrained to think, is the counsel of wisdom.

[1] Bertrand Russell, *Sceptical Essays*, p. 188. New York: W. W. Norton & Co., Inc., 1928.

THE ARITHMETIC VOCABULARY OF THE ELEMENTARY-SCHOOL TEACHER

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An obvious result of the recognized importance of vocabulary in elementary arithmetic is the greater need on the part of classroom teachers for a definite consciousness and understanding of the nature and the basic content of the vocabulary used. Furthermore, teachers in training need to be sensitized to the influence of vocabulary in learning. It is with this aspect of the problem that the writer has been concerned for some time.

In order to obtain objective information regarding the nature and the extent of the arithmetic vocabulary possessed by students preparing to teach elementary arithmetic and to impress upon them the significance of vocabulary in teaching that subject, the writer has formulated a survey test entitled "An Arithmetic Vocabulary Test for Teachers." This test, which forms the basis for the study herein described, consists of 10 parts, including 215 objective-type items giving a total point score of 150. It should be understood that the items employed in the test are not to be considered in any way as constituting the accepted vocabulary to be mastered or emphasized. They merely represent a cross-section of the arithmetic vocabulary found in the textbooks and in educational literature dealing with the teaching of arithmetic.

The nature of the items in each part of the test is briefly described below:

Part I. To select from a series the proper terms which are associated with the numbers used in examples of the various operations with whole numbers and fractions. Some of the terms to be properly matched are "subtrahend," "addend," "multiplier," "dividend."

Part II. To write, in Hindu-Arabic and Roman numerals, large numbers expressed in words.

Part III. To write, in words, numbers given in Hindu-Arabic and Roman numerals.

Part IV. To give examples of various kinds of numbers, such as mixed numbers, proper fractions, prime numbers, denominate numbers.

Part V. To give examples which show that the student knows such terms as "invert," "reduce," "reciprocal," "average," "common denominator."

Part VI. To give simple definitions of "area," "add," "quotient," etc.

Part VII. To associate a wide variety of names of units of measure with the systems of measure in which the names denote units.

Part VIII. To indicate the meanings of terms used in commercial activities, for example, "policy," "discount," "premium."

Part IX. To write the words and phrases for which a wide variety of commonly used arithmetic signs, symbols, and abbreviations stand.

Part X. To indicate the meaning of common terms used in mensuration.

Three principal sources were drawn on for the content of the test, namely, some of the current textbooks in the teaching of arithmetic,[1] *The Vocabulary of Arithmetic* by Buswell and John,[2] and "The Fundamental Vocabulary of Elementary-School Arithmetic" by Pressey and Elam.[3]

As a practical basis for determining satisfactory achievement on the part of the students, the co-operation of ninety-two teachers of arithmetic in Grades I–VI, inclusive, in two progressive school systems was obtained. Table 1 gives data on the scores made by the teachers in these school systems. An interesting observation to be made from the data in Table 1 is the lack of significant difference in the scores obtained from the teachers of the various grades. It is obvious, however, that the number of cases for each grade is too small to warrant conclusions. The twenty-five unclassified cases include those teachers who failed to indicate the grade which they

[1] *a*) Paul Klapper, *The Teaching of Arithmetic*. New York: D. Appleton–Century Co., Inc., 1934.

b) Robert Lee Morton, *Teaching Arithmetic in the Intermediate Grades*. New York: Silver, Burdett & Co., 1927.

c) Robert Lee Morton, *Teaching Arithmetic in the Primary Grades*. New York: Silver, Burdett & Co., 1927.

d) William F. Roantree and Mary S. Taylor, *An Arithmetic for Teachers*. New York: Macmillan Co., 1932 (revised).

[2] G. T. Buswell and Lenore John, *The Vocabulary of Arithmetic*. Supplementary Educational Monographs, No. 38. Chicago: Department of Education, University of Chicago, 1931.

[3] L. C. Pressey and M. K. Elam, "The Fundamental Vocabulary of Elementary-School Arithmetic," *Elementary School Journal*, XXXIII (September, 1932), 46–50.

were teaching. The small difference between the median and the mean for all the ninety-two cases indicates that the distribution of the scores is nearly normal.

TABLE 1

RESULTS FROM ADMINISTRATION OF "AN ARITHMETIC VOCABULARY TEST FOR TEACHERS" TO NINETY-TWO ELEMENTARY-SCHOOL TEACHERS

Grade Taught	Number of Teachers	Mean Score	Median Score	Range
I	10	121.9	122.5	117– 30
II	6	110.6	108.5	98–129
III	9	112.9	113.0	90–126
IV	12	116.0	116.0	104– 31
V	11	121.1	123.0	110– 32
VI	19	124.0	124.0	108– 39
All grades, including twenty-five unclassified cases	92	119.2	120.0*	90–139

* The probable error of the median is .9340.

TABLE 2

COMPARISON OF PERFORMANCE OF COLLEGE STUDENTS IN ELEMENTARY EDUCATION AND OF CLASSROOM TEACHERS ON "AN ARITHMETIC VOCABULARY TEST FOR TEACHERS"

	Teachers	College Students
Number of cases	92	30
Mean score	119.2	100.5
Median score	120.0	104.3
Range in scores	90–139	60–144
Lower quartile	113.2	89.5
Upper quartile	127.5	114.5

The student scores reported here were obtained from thirty students enrolled in classes in the teaching of elementary arithmetic offered in a junior college and a university school of education. Table 2 presents a comparison of the results of the students'

TABLE 3

ITEMS IN "AN ARITHMETIC VOCABULARY TEST FOR TEACHERS" ON WHICH 25 PER CENT OR MORE OF TEACHERS OR COLLEGE STUDENTS FAILED

Item	Percentage Failing	
	Teachers	College Students
Part I (15).* Indicating meaning of terms:		
1. Minuend	16	50
2. Subtrahend	16	40
3. Dividend	11	33
4. Numerator	1	26
5. Radicand	28	30
Part II (15):		
a) Writing in Hindu-Arabic numerals:		
1. Nineteen billion, eight hundred million, fifty	15	37
2. One-half million	23	43
3. Four ten-thousandths	10	40
b) Writing in Roman numerals:		
4. Six hundred fifty-seven	28	70
5. Eighty-six	25	57
6. Seventeen hundred seventy-six	37	87
7. One hundred seven	11	30
Part III (10). Writing in words:		
1. 101	4	37
2. 36.008	70	60
3. DCIX	27	67
4. MCDXCII	85	77
5. 1,005,120,300	12	27
6. LXIX	74	73
7. XCCXXVI	95	97
8. 0.16 2/3	77	53
9. 2,427	72	67
Part IV (15). Giving examples of:		
1. Proper fraction	3	27
2. Improper fraction	8	30
3. Circulating decimal fraction	97	97
4. Mixed decimal	37	57
5. Mixed number	7	37
6. Repeating decimal fraction	73	73
7. Complex fraction	50	90
8. Abstract number	36	57
9. Prime number	54	73
10. Concrete number	53	93
11. Integer	22	53
12. Unit fraction	87	93
13. Compound denominate number	64	97
Part V (10). Indicating meaning of:		
1. Reciprocal	60	90
2. Median	43	67
3. Average	39	33
4. An exponent, for example, 10^4	39	40

* The figures in parentheses indicate the number of items in each part of the test.

TABLE 3—*Continued*

Item	Percentage Failing	
	Teachers	College Students
Part VI (10). Writing definition of:		
1. Equal	35	27
2. Average	54	57
3. Area	32	60
4. Add	15	30
5. Aliquot	83	100
6. Quotient	5	30
7. Count	32	57
Part VII (40). Recognizing relation between:		
1. *Degree* and measure of angles and arcs	27	33
2. *Gallon* and dry and apothecaries' fluid measure	80	90
3. *Dozen* and the system of counting	7	27
4. *Minute* and the measure of angles and arcs	98	97
5. *Square yard* and the measure of area	23	57
6. *Mill* and the system of United States money	18	33
7. *Section* and the measure of area	20	37
8. *Barrel* and the system of liquid measure	64	60
9. *Gross* and the system of counting	32	67
10. *Pound* and the English system of money	87	80
11. *Meter* and the measure of length	29	47
12. *Gram* and the measure of weight	73	47
13. *Ounce* and apothecaries' fluid measure	100	93
14. *Dram* and apothecaries' liquid measure	30	67
15. *Gill* and liquid measure	34	63
16. *Second* and the measure of angles and arcs	99	90
17. *Quart* and dry measure	72	87
Part VIII (20). Knowing meaning of:		
1. Discount	26	20
2. Premium, as used in insurance	1	27
3. Payer, as used in connection with checks	29	27
4. Bank draft	16	37
5. Sales slip	10	33
6. Interest, as used in connection with bonds	55	63
7. Assets	34	57
Part IX (60). Knowing meaning of:		
1. "÷"	78	63
2. ":"	58	43
3. #16	26	43
4. 16#	48	57
5. per	68	80
6. pr	30	50
7. M	26	73
8. C	29	63
9. com	13	33
10. T	18	43
11. per cent	93	83
12. cwt	15	50
13. Dr	55	70
14. Cr	38	20
15. π	29	33
16. g	93	57
17. £	13	57

TABLE 3—*Continued*

Item	Percentage Failing	
	Teachers	College Students
Part X (20). Knowing meaning of:		
1. Perimeter	12	33
2. Hypotenuse	13	43
3. Area	27	47
4. Dimensions	38	53

performance on the test with the performance of the ninety-two teachers. The data indicate that a marked difference exists between the level of the arithmetic vocabulary of the classroom teacher and that of the student in training.

The specific items in the test on which the percentage of failure among the teachers or students, or both, was 25 or more are given in Table 3. This table shows the nature of the items in arithmetic vocabulary which appeared to be unknown by at least 25 per cent of the teachers or prospective teachers included in the study.

The errors in writing numbers in words consisted principally in using "and" improperly and in failing to use hyphens where they should appear. For example, a number such as 1,127 was written as "one thousand one hundred and twenty seven." An interesting discovery in connection with the test on units of measure was the large number who did not know what a "mill" is.

In the section on defining signs, symbols, and abbreviations, two or three interesting results were obtained. The term "per cent" was defined as "%" by most of those missing it, while the abbreviation "Dr." was said to stand for "doctor." The sign "÷" was missed by a higher percentage of teachers than students and was described as meaning "divide" instead of "divided by."

CONCLUSION

There is a significant difference between the arithmetic vocabularies of teachers as a group and students in elementary education.

There is a definite place for teaching the technical vocabulary of arithmetic to students who intend to teach arithmetic, particularly

(1) items used in connection with the fundamental operations with whole numbers; (2) common and decimal fractions; (3) items connected with denominate numbers and the units of measure; and (4) large numbers, both Hindu-Arabic and Roman.

Both teachers and students show lack of ability to express numbers correctly in words and especially to write numbers in words.

A significant proportion of both teachers and students manifest a lack of understanding of a number of important signs and abbreviations used in arithmetic.

Both students and teachers manifest a need for improvement in ability to define in simple language many of the concepts in arithmetic.

SELECTED REFERENCES ON PUBLIC-SCHOOL ADMINISTRATION. I

WILLIAM C. REAVIS AND NELSON B. HENRY
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The references herewith presented were selected from material published during the period November 1, 1936, to October 31, 1937. In this article appear titles classified under (1) general administration, (2) state school administration, (3) city school administration, and (4) supervision. Titles classified under (5) teaching staff, (6) school finance, (7) business management, and (8) public relations will be published in the February number of this journal.

GENERAL ADMINISTRATION[1]

1. BRUBACHER, JOHN S. "The Constitutionality of a National System of Education in the United States," *School and Society*, XLVI (October 2, 1937), 417–23.

   Suggests that recent Supreme Court decisions signify sufficient constitutional basis for a national system of education if the conditions denote the need for national activity in education.

2. BRUNNER, EDMUND DES., and LORGE, IRVING. *Rural Trends in Depression Years*. New York: Columbia University Press, 1937. Pp. xvi+388.

   Reports the results of a study of changes in rural social life in the United States between the years 1930 and 1936.

3. BURKE, ARVID J., and ALEXANDER, CARTER. "Guide to the Literature on Public-School Administration," *Elementary School Journal*, XXXVII (June, 1937), 764–78.

   A bibliographical guide to direct students in finding materials in the literature on public-school administration.

4. CHAMBERS, M. M. (Editor). *The Fifth Yearbook of School Law, 1937*. Washington: American Council on Education, 1937. Pp. 144.

   A narrative topical summary of decisions of the higher courts in all states of the United States of America in cases involving school law, as reported during the calendar year 1936.

[1] See also Item 402 in the list of selected references appearing in the September, 1937, number of the *Elementary School Journal*.

5. DEWEY, JOHN. "Democracy and Educational Administration," *School and Society*, XLV (April 3, 1937), 457–62.

The author urges co-operative inquiry and experimentation among teachers in the interests of democratic administration in the schools.

6. EDUCATIONAL POLICIES COMMISSION. *Research Memorandum on Education in the Depression*. Prepared under the Direction of the Committee on Studies in Social Aspects of the Depression. Bulletin No. 28, 1937. New York: Social Science Research Council, 1937. Pp. xii+174.

An attempt to make a critical appraisal of existing conditions in education and to stimulate desirable changes in the purposes, procedures, and organization of education.

7. KUMPF, CARL H., and KUMPF, CECILE LAFOLLETTE. "The Values of Co-operative Administration," *Appraising the Elementary-School Program*, pp. 292–97. Sixteenth Yearbook of the Department of Elementary School Principals. Bulletin of the Department of Elementary School Principals, Vol. XVI, No. 6. Washington: Department of Elementary School Principals of the National Education Association, 1937.

Discusses opportunities for teacher participation in school administration.

8. NEWLON, JESSE H. "The Importance of a Point of View in Educational Administration," *School and Society*, XLV (March 13, 1937), 361–68.

Discusses the essential character of educational administration in a democratic society.

9. OUTLAND, GEORGE E., and MARTIN, CHARLES K., JR. "Transiency and Federal Aid to Education," *School and Society*, XLVI (July 24, 1937), 126–28.

Educational implications of mobility of population urged as an argument for federal aid.

10. SANDERS, WILLIAM J. "The Issue in Educational Administration," *Educational Administration and Supervision*, XXIII (April, 1937), 280–83.

Discusses the issue in educational administration between rigid dictatorial regimentation of teaching and learning and a flexible co-ordination of teachers and pupils in the free exercise of their capacity for growth.

11. *School Organization*. Review of Educational Research, Vol. VII, No. 4. Washington: American Educational Research Association of the National Education Association, 1937. Pp. 357–446.

Presents a synopsis and interpretation of the contributions in the field of school organization from July 1, 1934, to July 1, 1937. The bibliography contains 481 references.

12. STRAYER, GEORGE D. "Building the Profession of School Administration," *School Executive*, LVI (March, 1937), 248–50, 270.

Proposes that the time has arrived to establish requirements for the profession of school administration acceptable by boards of education and by state legislatures.

13. TEAD, ORDWAY. "Democracy in Administration," *Social Frontier*, III (January, 1937), 105–7.

Considers the question of democratic control in school administration. The conclusion is drawn that the educational system will profit by wider representation in the bodies of administrative control.

STATE SCHOOL ADMINISTRATION

14. ALVES, H. F. "Planning New Local School Units," *Nation's Schools*, XIX (January, 1937), 18.

Describes the steps involved in organizing schools and school-attendance areas that shall be more satisfactory than those now commonly found.

15. BELKNAP, BURTON H. "Pupil Transportation in the State of New York," *American School and University*, IX, 516–19. New York: American School Publishing Corp., 1937.

The writer sets up a number of requirements which provide for the safety of the pupils transported and assure economy in operation.

16. BURKE, ARVID J. "State Aid for Reorganization," *Nation's Schools*, XIX (April, 1937), 35–36.

Asserts that state-wide programs of district reorganization must provide state aid for certain types of "extra" costs.

17. CHAMBERS, M. M. "State Centralization Goes On," *Nation's Schools*, XIX (June, 1937), 33–34.

Supports the view that increasing concentration of authority and responsibility in state departments of education is widely welcomed as in harmony with current economic and social changes.

18. DAWSON, HOWARD A. "The Local Unit of School Administration," *American School and University*, IX, 21–25. New York: American School Publishing Corp., 1937.

A descriptive account of the types of local units of school administration. The author outlines a plan of reorganization.

19. HOLLOWAY, HARRY V. "A State Unit of School Administration," *American School and University*, IX, 26–28. New York: American School Publishing Corp., 1937.

Points out the advantages that have accrued from a state unit of school administration in the state of Delaware.

20. JORDAN, FLOYD. "Functions of Divisions of Elementary Education in State Departments of Education," *Elementary School Journal*, XXXVII (January, 1937), 365–68.

Lists and gives frequency of performance of duties of personnel employed in divisions of elementary education in state departments of education.

21. JORDAN, FLOYD. "The Organization of State Departments of Education," *Educational Administration and Supervision*, XXIII (February, 1937), 149–53.

Describes varying features of organization characterizing different state departments.

22. LAMBERT, A. C. "Trends in the Transportation of School Children in the United States," *American School Board Journal*, XCIV (April, 1937), 37, 40.

Historical treatment of school transportation in the United States during the past three decades. Important trends are indicated.

23. OVERN, A. V. "Educational Program of the County," *School Executive*, LVI (December, 1936), 147.

A brief discussion of inequalities of school support in Sargent County, North Dakota. Methods are suggested for reducing the number of schools and improving the program of work offered without increasing the taxes.

24. *Safety in Pupil Transportation*. Research Bulletin of the National Education Association, Vol. XIV, No. 5. Washington: Research Division of the National Education Association, 1936. Pp. 199–238.

An analysis of the regulations and practices of the various states with reference to safety in pupil transportation.

25. STRAYER, GEORGE DRAYTON. "The Relationship between State and Local Administration of Schools," *American School and University*, IX, 18–20. New York: American School Publishing Corp., 1937.

Treats the division of authority in the administration of schools between state and community.

26. WILLIAMS, R. C. *State Responsibility for the Support of Public Schools*. Research Bulletin No. 20. Des Moines, Iowa: State Department of Public Instruction, 1936. Pp. 28.

A study of state aid for public schools in Iowa, with suggestions for improvement of the existing plan.

CITY SCHOOL ADMINISTRATION[1]

27. "Administration of Clerical Service in City School Systems." Educational Research Service, Circular No. 4. Washington: American Association of School Administrators and Research Division of the National Education Association, 1937. Pp. 48.

[1] See also Item 552 (Reavis, Bolmeier, and Stumpf) and Item 553 (Simon) in the list of selected references appearing in the November, 1937, number of the *School Review*.

Deals with the administration of clerical personnel in 71 cities having populations of more than 100,000.

28. AKRIDGE, GARTH H. *Pupil Progress Policies and Practices.* Teachers College Contributions to Education, No. 691. New York: Teachers College, Columbia University, 1937. Pp. viii+76.

This study deals with the cumulative effect of the regularity of pupil progress on the central tendency and the variability in mental age and achievement at a given grade level in the elementary school.

29. ALLEN, CHARLES FORREST; ALEXANDER, THOMAS; and MEANS, HENDREE WINSTON. *Extra-Curricular Activities in the Elementary Schools.* St. Louis, Missouri: Webster Publishing Co., 1937. Pp. x+604.

Sets forth guiding principles for organizing and administering extra-curriculum activities in elementary schools and suggests plans and procedures for introducing programs of activities in schools organized according to the platoon or traditional plan.

30. BOLTON, FREDERICK ELMER; COLE, THOMAS RAYMOND; and JESSUP, JOHN HUNNICUT. *The Beginning Superintendent.* New York: Macmillan Co., 1937. Pp. xxxiv+614.

A treatment of administration for beginning superintendents in small school systems. The topics and problems considered have been selected on the basis of probable helpfulness. The discussion is both explicit and concrete.

31. CHAMBERS, M. M. "School District v. City," *Nation's Schools,* XVIII (November, 1936), 29–30, 34.

A discussion of the legal basis of the relations between the city and the school district.

32. HEFFERNAN, HELEN. "Classification and Promotion Policies in Some City School Systems," *California Journal of Elementary Education,* V (May, 1937), 228–34.

An answer to many inquiries concerning problems of classification and promotion of pupils and the reporting of pupil progress to parents.

33. LOMBARD, ELLEN C. "Parent Education in the City School," *School Life,* XXII (March, 1937), 219.

A brief account of the "well-integrated program" of parent education which is conducted at Binghamton, New York, under the direction of the superintendent of schools and the director of the division of parent education.

34. MCGAUGHY, J. R. *An Evaluation of the Elementary School.* Indianapolis, Indiana: Bobbs-Merrill Co., 1937. Pp. viii+422.

The author of this work presents in detail his philosophy of elementary education, with a discussion of present procedures and practices in the light of his philosophy.

35. NEWLON, JESSE H. "Responsibility of the Superintendent for Professional Leadership," *School Executive*, LVI (March, 1937), 251–52, 275, 278.

Discusses the various types of superintendents and the excellent qualities possessed by a genuine educational leader.

36. OTTO, HENRY J., and HAMRIN, SHIRLEY A. *Co-curricular Activities in Elementary Schools*. New York: D. Appleton–Century Co., Inc., 1937. Pp. xiv+442.

A detailed discussion of the organization and the management of pupil activities which once were thought of as "extra-curricular" but now are more generally regarded as an essential part of the educational program.

37. PFAFF, C. S. "Administrative Set-up of the New Orleans Public Schools," *American School Board Journal*, XCIV (February, 1937), 47.

A brief historical review of the development of administrative control in the public schools of New Orleans.

38. RELLER, THEODORE LEE. "Executive Responsibility in City School Administration," *American School Board Journal*, XCIII (September, 1936), 19–20, 85; (November, 1936), 21–22; (December, 1936), 14, 68.

A historical treatment of the development of multiple and dual executive responsibility in city school administration.

39. "Size, Tenure, and Selection of Boards of Education in Cities above 30,000 in Population." Educational Research Service, Circular No. 6. Washington: American Association of School Administrators and Research Division of the National Education Association, 1937. Pp. 38.

Recent data for 249 city school systems.

40. WRIGHT, FRANK L. "The Superintendent and the Board of Education," *American School Board Journal*, XCV (September, 1937), 19–21.

The author discusses ways and means of improving the relations between the superintendent and the board of education.

SUPERVISION[1]

41. DANIELSON, EVA. "Problems of Supervision Confronting Elementary Principals Today," *California Journal of Elementary Education*, VI (August, 1937), 50–53.

Suggests a supervisory program which will release the creative potentialities of teachers.

42. DODD, M. R. "Introducing the Supervisory Program," *Educational Administration and Supervision*, XXIII (January, 1937), 63–67.

A plea for the exercise of extreme caution and the recognition of the personal element when a supervisory program is introduced.

[1] See also Item 54 (Mackenzie) in the list of selected references appearing in the January, 1938, number of the *School Review*.

43. REEDER, EDWIN H. "Supervision in Modern Schools," *Educational Administration and Supervision*, XXII (December, 1936), 641–52.

Urges the need of new theories of supervision to meet modern demands on the schools.

44. SANTEE, J. F. "Supervision of Smaller School Systems," *American School Board Journal*, XCIII (November, 1936), 23–24.

A philosophy of supervision for smaller school systems is presented, and a number of suggestions which may be helpful to superintendents in smaller communities are offered.

45. TRAINOR, A. WINFIELD. "Growth in Service through Supervision," *New York State Education*, XXIV (February, 1937), 356–57, 400–401.

Points out that it is the function of supervision to set up situations in appropriate form so that, through group co-operation, guidance, and leadership, superintendents, principals, and teachers are helped to understand the significance of new problems, changing methods, and the basic philosophy on which they are founded.

46. WEBER, D. H. "Superintendents and Their Annual Reports on Supervision," *Nebraska Educational Journal*, XVII (February, 1937), 44, 51.

The author discusses the place of supervision in the annual reports of superintendents. He suggests a number of items which should be included in the annual reports at least once during a period of two or three years.

Educational Writings

REVIEWS AND BOOK NOTES

The revised Stanford-Binet tests of intelligence.—The original Stanford Revision of the Binet-Simon Intelligence Scale has been generally accepted as the most valid and reliable means of measuring "intelligence" available for practical use. There has, of course, been extensive criticism of the concept of intelligence as measured by such a composite test, and much research is being carried on, by the method of factor analysis, to determine the composition of ability. Some psychologists—Spearman, for example—identify a general factor, *g*, but hold that this factor is not identical with the ability required to pass a composite intelligence test. Others, such as Thurstone, deny the existence of a general factor and reduce ability to a composite of primary abilities. On the other hand, some psychologists deny that factor analysis is an adequate method of determining the composition of ability.

Whatever may be the outcome of the disputes concerning the nature of ability, it would seem that the practical usefulness of the scales which we call "intelligence tests" justifies the continued employment of these instruments and the refinement of their techniques. It is possible that they may ultimately be replaced by more analytical means of measurement, but the time does not seem near at hand. The long-expected revision of the Stanford-Binet scale,[1] therefore, will be heartily welcomed by educators and psychological clinicians.

The standardization of a mental-age scale is an enormous task, and for this reason few persons have undertaken the work. It is necessary to adjust the difficulty of the tests at each age level in such a way that the mean mental age of each age group agrees with the chronological age and that the variability of intelligence quotients at the successive age levels is equal. When this task has been accomplished, however, the significance of a child's performance is evident from his score on the test. Therein lies the practical advantage of the mental-age scale.

The present revision has corrected certain defects which had become evident in the first scale and has greatly expanded it. The earlier scale was less satisfactory at the earlier and the later ages than at the intermediate ages. The

[1] Lewis M. Terman and Maud A. Merrill, *Measuring Intelligence: A Guide to the Administration of the New Revised Stanford-Binet Tests of Intelligence.* Boston: Houghton Mifflin Co., 1937. Pp. xii+460. $2.25.

present scale yields a better distribution of intelligence quotients at these ages. It is based on a much larger number of cases, particularly at the extreme ages, and the cases were much more carefully selected in order that the various sections of the country and various occupational levels might be represented. The scale is extended to age two at the lower end and is extended at the upper end by the addition of many more adult tests. Tests are supplied for half-years below five years of age, and the gaps at years eleven and thirteen have been filled. The new scale uses a somewhat larger number of non-language tests, but these are chiefly in the lower ages.

In the earlier scale the intelligence quotient was calculated by using the actual chronological age as the divisor up to age sixteen and using age sixteen thereafter. This procedure gave a sudden break at sixteen not justified by any reasonable assumption regarding the rate of mental growth. In the new scale the chronological ages between thirteen and sixteen are corrected so as to reduce the divisor gradually. These features illustrate the refinements which have been made.

An important change in the new scale is the provision of two equal and parallel forms. The two forms are largely different in specific content but very similar in the types of tests that they contain and in the mental processes required. The scale is carefully standardized as to the mean intelligence quotient and the standard deviation of various ages. It is somewhat more uniform in these respects than the old scale. The standard deviation of intelligence quotients is several points larger than on the old scale, and this difference makes the intelligence quotients of the two scales not strictly comparable. This fact should be taken into account in testing the same child by both scales and also in educational or administrative adjustment to intelligence levels. The difference in the latter case, however, would be slight.

The new scale evidently constitutes a marked advance over the old one. In addition to the essential improvements which have been mentioned, the form of the manual has been made more convenient and the instructions for giving and scoring have been made clearer. The scale is still an interview scale, and the scoring in many of the tests is based on a discriminative judgment of the response. The correct use of the scale, therefore, demands careful preparation and training. The general scores determined by competent testers, however, should not vary a great deal. It is the belief of the reviewer that this revision will have a long and productive career comparable to that of the first edition.

FRANK N. FREEMAN

Teaching and learning in the elementary school.—At a time when the problems of learning presented in the elementary-school curriculum are being studied and treated from many viewpoints based on varied philosophical concepts, one welcomes an effort to view learning in terms of child development. In the vol-

ume under review[1] the author has ably co-ordinated the scientific studies and the philosophical treatises that relate to the major problems involved in learning the three R's.

Recent findings in child psychology dealing with learning, motivation, maturation, and individual differences have changed our notions of the organization of curriculum materials during the elementary-school period. These new data have presented further proof of the necessity of organizing learning materials in harmony with the development and the learning ability of the pupil. It is in this connection that Hildreth's approach to the learning of the three R's presents a definite contribution because of the nature of the organization and the application of scientific findings to the problems of learning. The pupil is brought in as the chief element of the learning situation, and his educational growth is interpreted in terms of the elements that have affected him.

In this rather voluminous book the materials are arranged in four sections: (1) a description of the newer program in the skills of reading, spelling, arithmetic, and writing; (2) a discussion of the problem of failure in school achievement; (3) an outline for diagnostic work in the skills; and (4) suggestions for improved instruction in skill techniques. A carefully chosen list of references and recommended readings on the literature of the topic under consideration is presented at the end of each chapter. These lists should add to the usefulness of the volume as a textbook for mature students of educational psychology.

The author has not chosen to deal in generalizations based on carefully defined psychological laws but rather presents an individual approach to the problems of learning, recognizing at all times that the nature of the individual pupil and the learning situation must harmonize if learning is to be efficient and effective. In connection with suggestions for remedial work and improved teaching, the author writes: "Pupil interests should serve to direct the organization of materials. Meaningful applications should be stressed at all times in remedial work and increasingly so with pupils of less than average learning capacity. The reading, spelling, and arithmetic that the children need to acquire should be taught in the way in which it is to function" (p. 656). The materials dealing with learning difficulties are sufficiently specific in their application to the problems of learning the three R's that the student or the teacher should find them of value. However, the individualistic approach rather than the more specific psychological-law approach means that the ideas presented need to be adapted to the nature of the learner and to the learning situation.

Two approaches are made to the major problems. In the first of these, which is critical in nature, an analysis is made of the commonly found practices, and the weaknesses are pointed out. In the second approach especial consideration is given to correcting undesirable procedures. This phase of the discussion presents some very practical ideas concerning the application of psychological facts

[1] Gertrude Hildreth, *Learning the Three R's: A Modern Interpretation.* Minneapolis, Minnesota: Educational Publishers, Inc., 1936. Pp. x+824.

and methods to the everyday problems of the elementary-school child. The philosophical approach to the problems faced by the classroom teacher makes this volume significant for the teacher in training, and the inclusion of scientific materials as a basis for the analyses of the learning problems increases the validity of the generalizations and the discussions presented.

K. C. GARRISON

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Curriculum principles and classroom practice.—A tendency too commonly prevailing in educational teaching and writing is the failure systematically to show how theory may be related to practice. An assumption appears to be inherent in much of the current discussion of educational problems that a considerable amount of information about theory, if supplemented by a certain amount of experience and information concerning modern practice, will somehow result in ability on the part of administrators and teachers to utilize theory effectually in their daily work. That such a result does not generally obtain, however, is only too well attested by the number of school workers whose practice appears virtually untouched by their pre-service or in-service training. Of this group, some sincerely seek the aid of professional theory, others lack confidence in it, and still others appear openly hostile to it. This situation is undoubtedly due in a large measure to a feeling on the part of field workers that much educational theory is too general and has little relation to problems daily met in the school. It is consequently refreshing to encounter a book[1] in which the author recognizes and systematically attacks the problem of enabling teachers to use basic theory in their everyday classroom practice.

The organization of the volume includes an introductory chapter, entitled "Teaching and Curriculum-making," and four parts, bearing the titles: "Basic Principles," "The Course of Instruction," "Method in Teaching," and "Evaluation of Teaching and Curriculum-making." There are, in all, twenty-three chapters. A preface by the author and the editor's introduction precede the main content.

The author's general theory of education is defined as "progressive adjustment." Implied in this theory are five principles of educational method, designated as "need of experiencing," "unity of experiencing," "continuity of experience," "selectivity in experiencing," and "contingency of experiencing." Significant elements of the educative process, such as construction of courses of instruction, teaching methods, and evaluation of instructional procedures, are analyzed and classified into "features of practice." The educational principles enumerated are utilized as standards by which all essential "features of practice may be estimated, judged, or evaluated" (p. 257). Method and curriculum are regarded as inseparable. No general distinction is made between various age

[1] John P. Wynne, *The Teacher and the Curriculum*. New York: Prentice-Hall, Inc., 1937. Pp. xxii+440. $2.50.

and grade levels, the principles and practices being treated as applicable to teaching in elementary school, secondary school, and college.

The chief merits of the book are the author's recognition, as a fundamental weakness in educational programs, of school workers' inability to apply theory adequately in practice and his effective dealing with the one sound method of remedying this weakness. Utilization of principles has, of course, long been advocated by many educational leaders as the soundest means of applying basic theory to practice. Few, however, have sensed how difficult it is for teachers to understand, let alone accomplish, the basing of instructional procedures on educational principles and how necessary it is that they receive direct, systematic instruction regarding the application of principles. Critical workers may question the author's selection of principles, but they may substitute principles of their own choosing and find his plan undiminished in effectiveness. How the teacher may be assisted to plan, to avoid groping with respect to theories, and to evaluate instructional outcomes through the use of principles is consistently illustrated throughout the book.

While modern points of view predominate, lack of emphasis on school activities outside the classroom and on the contributions to the educative process made by home and community constitutes, in the opinion of the reviewer, a major omission. The teacher of today must develop procedures for these important elements of the curriculum. The stress placed exclusively on classroom activities may give the average reader an impression that only traditional informations and skills are to be related to basic principles.

Two conditions prevailing in the educational field indicate the chief spheres of this volume's service. First, greater backgrounds of study, analysis, and experimentation than those currently possessed by the rank and file of school workers will be necessary before they can profit appreciably from undirected use of such a technical treatise. Second, even after workers understand the factors involved in applying principles, a period of guided experience in the field is necessary before they can successfully base everyday procedures on principles. The book should, consequently, attain a particularly wide use in classes in schools of education and teachers' colleges and in programs of in-service training conducted by professionally minded principals.

PAUL R. PIERCE

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A new landmark in the study of human heredity and environment.—Since Sir Francis Galton's work on *Hereditary Genius: An Inquiry into Its Laws and Consequences* nearly seventy years ago, widely varied attempts have been made to appraise the roles of nature and nurture in human development. Most promising of all methods are those involving the study of twins, particularly where experimental procedures are possible through co-twin controls. The investiga-

tion reported in a recent publication[1] employed naturalistic and test-survey methods rather than experiment, but it may be regarded as helping to set the stage for later more crucial research. In fairness to the authors it should be pointed out that more crucial research can hardly be undertaken without vastly greater resources than have yet become available for work in this field.

It is always interesting to observe results from a collaboration of the sciences. In this study are represented the pooled efforts of a biologist, an educational psychologist, and a statistician. Each has contributed indispensably to the total picture, although at points the picture becomes a mosaic with the separate parts not wholly in alignment. Included in the study were three groups of subjects: fifty pairs of identical twins, fifty pairs of fraternal twins (of the same sex), and as many pairs as could be accumulated of identical twins who had been reared from infancy in different homes. In the last group were twenty pairs, including one pair previously reported by H. J. Muller. No comparable collection has ever been made.

Among the twins reared together, of particular interest is the comparison of twin differences in the identical versus the fraternal group. The greater similarity of identical twins is attributable primarily to the fact that they share the same heredity; fraternal twins are genetically no more alike than ordinary brothers and sisters. Other factors complicate the situation to some extent, particularly the tendency, as Jones and Wilson have shown in a California study (Harold E. Jones and Paul T. Wilson, "Reputation Differences in Like-Sex Twins," *Journal of Experimental Education*, I [December, 1932], 86–91), for identical twins to share a more similar environment than do fraternal twins. By the use of statistical methods somewhat too elaborate to be grasped by the average reader, the conclusion is reached that among fraternal twins individual differences in intelligence (in terms of variance) are determined by hereditary factors to an extent of about 75 per cent. In the case of physical measurements this hereditary factor is only slightly greater. In the case of educational age it falls to 64 per cent. For verbal functions, such as vocabulary and spelling, it is markedly higher than for arithmetic. The authors are well aware of the fact that these figures, which carry an appearance of great mathematical precision, must be used with care; they apply to specific functions in a specified genetic sample developing within certain environmental ranges. Results could well be different in another cultural group or in a group of children having a different level or a different degree of variation in any of the traits considered. Moreover, as is pointed out, it is not yet clear to what extent the residual environmental factors may be attributed to the prenatal environment and to what extent they are due to environmental conditions after birth.

With the smaller groups of twins, reared apart, the primary emphasis of

[1] Horatio H. Newman, Frank N. Freeman, and Karl J. Holzinger, *Twins: A Study of Heredity and Environment*. Chicago: University of Chicago Press, 1937. Pp. xvi+370. $4.00.

this report is quite properly on the case studies, which present, with photographs, a fascinating account of the characteristics of identical twins who have developed in different homes. When the intelligence quotients of members of twin pairs are compared, an average difference of about eight points is found, only slightly greater than that of identical twins who have been reared together. On tests of school achievement similarity is not so marked, and in some pairs wide divergences occur. It is unfortunate that in the study of personality traits the methods used involved tests which are now largely discarded, although at the beginning of the study (approximately ten years ago) these were among the best available. In the case of the association tests, a qualitative study of the types of association would probably be of greater interest than the purely quantitative material reported.

In addition to its interest for the general reader, the volume contains much valuable material for those concerned with the technical aspects of twin research. In addition to its value for psychologists, it is from the biological point of view probably the most important study in this field since Gunnar Dahlberg's work in 1926 (*Twin Births and Twins from a Hereditary Point of View.* Stockholm, Sweden: Bokförlags-a.-b. Tidens Tryckeri).

H. E. JONES

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Two textbooks in history for the elementary grades.—The elementary-school supervisor in East Chicago, Indiana, has given us two textbooks[1] which are interesting and worth while. One of these, entitled *Glimpses into the Long Ago*, covers the field often spoken of as the European background to American history. This book is divided into four sections of unequal length, the first two being about half as long as the last two. The first section discusses the Stone Age peoples of Western Europe and the Mediterranean. In the second division the author takes up the ancient civilizations of the Nile and of the Euphrates. The third section is devoted to Greece and Rome, while the last section discusses medieval culture. The book is well written and interesting. The illustrations are so abundant that few pages can be found composed wholly of printed matter. Many of the illustrations cover entire pages, and numerous colored cuts appear. At the end of each chapter appear four or five pages of methodology. This material includes a list of questions which the teacher may ask the pupil or which the pupil may ask himself, a matching problem dealing with the meaning of difficult words or phrases, a short list of library references, and a much longer list of suggested activities.

There is one unusually interesting feature of this book. The author has composed a narrative which describes successfully, though briefly, the culture of the Middle Ages and ancient times with the use of very few proper names of peoples, places, and events. The average textbook probably includes at least

[1] Edna McGuire, *Glimpses into the Long Ago*, pp. 334, $0.96; *A Brave Young Land*, pp. vi+392, $1.08. New York: Macmillan Co., 1937.

ten times as many of these proper names. Since some of these names are drawn from languages very different from ours, the conclusion probably is that this book will be less difficult than other textbooks. It is not impossible that this feature of the book has been carried too far. Thus, in the entire chapter on ancient Egypt only one personality, the god Osiris, is mentioned. The section dealing with the civilizations of the Tigris and Euphrates includes only one name, Hammurabi. In the longer section dealing with the Greeks may be found the name of the Persian king, Xerxes, but there is no reference to any of the Greek leaders who resisted the Persians. The *Iliad* and the *Odyssey* are both mentioned, but the name of Homer is omitted. Zeus, Hera, Apollo, Demeter, Athena, and Dionysus appear. Socrates and Plato are included, but Aristotle is omitted. Both Philip and Alexander, Macedonian kings, are mentioned but not Pericles or Demosthenes. The classroom teacher will probably need, then, to supplement the brief list of personalities in the book with additional names.

At the close of this book is a word list giving the pronunciation of all terms and proper names used which may be difficult. Last of all there is a good index. This publication is, on the whole, a most usable book.

The same author has given us another textbook, *A Brave Young Land*, the contents of which deal with American history. This book, also, is divided into four divisions. The first division deals with conditions in Europe which made possible the discovery and the occupation of the New World, including the journeys of Marco Polo, the efforts to find a new way to the East through Africa, and finally the voyages of Columbus. In addition, the Renaissance and the Protestant Reformation are discussed in some thirty pages. The second division deals with Spanish conquests and explorations, covered in some fifty pages, while about the same amount of space is given to the French, English, and Dutch activities in North America. The third division is the story of the English, Dutch, and Swedish colonies from Jamestown and Plymouth to Georgia. The last division of the book discusses rather briefly the American Revolution. In printing and general construction the two books are much alike. *A Brave Young Land*, however, includes not nearly so many illustrations as does *Glimpses into the Long Ago*. On the whole these illustrations also are less instructive than the cuts used in the first book. Again the effort to simplify the material by referring to few personalities is evident. Again, also, the teacher will need to supplement the persons mentioned in order that the significance of events may be discussed. For example, the Protestant Reformation is discussed with the mention of only one name, Martin Luther. As in the case of the other volume, each chapter closes with three or four pages of methodology. At the end also is a self-pronouncing word list and a satisfactory index.

Here are two very usable textbooks. They are not beyond the comprehension of intermediate-grade children—an important characteristic.

DUDLEY S. BRAINARD

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The teaching of art.—Literature dealing with various phases of the arts has been increasing at a tremendous rate in recent years. During the past decade more than twenty books have been published in the United States covering the specialized field of art education. These books deal with the problems of organization and of administration and with the theory and methods of teaching the subject in the elementary-school, high-school, and college divisions of the curriculum.

A recent publication[1] commands attention as a contribution to the subject of art-teaching in the public school. It is a methods book for teachers in training, which emphasizes educational principles and interprets them in terms of art education. The authors assume that the student will have a fundamental training in art before beginning the study of art education, and for this reason there is no attempt in the book to teach the subject matter. The purpose of the book is "to help the teacher orient herself and her art work in the general scheme of education, so that she may better understand the aims of art education, select pupil experiences more discriminatingly, and adjust her work with greater finesse to other phases of education" (p. v).

The book is divided into the following thirteen unit divisions: I. "Art Education Is Essential"; II. "The Selection of Art Experiences"; III. "The Technique of the Art Lesson"; IV. "Creative Self-expression in Illustration"; V. "Design Activities in the Child-centered Art Class"; VI. "Industrial Art for Social Understandings"; VII. "Color Experiences: Creative and Appreciative"; VIII. "Developing Good Taste in Home and Dress"; IX. "Using Commercial Art"; X. "Great Art of the Past Contributes to Aesthetic Enjoyment in the Present"; XI. "Extra-curricular Activities in Art"; XII. "Scientific Measurement in Art Education"; XIII. "Management of Mechanical Details in the Art Lesson."

Each division contains a set of discussion questions for summarizing the unit and a list of references for parallel reading. The final pages include a well-selected "Topical Bibliography of Art Books," a list of "Sources of Art Supplies and Illustrative Materials," and an index. Some confusion may result from use of the list of firms, supply-houses, and art magazines as a number of those mentioned have gone out of existence or have changed names since the economic depression.

Five major objectives are recognized by the authors as essential in planning the art curriculum: (1) creative self-expression, (2) personal enrichment, (3) social worth, (4) a recreational resource, and (5) vocational training. With these objectives as guides, suggestions are given for developing the art program for each of the twelve grades of the school.

The book presents a great mass of valuable material for the guidance of teachers of art. Perhaps the only criticism of the production is that it is really

[1] Florence Williams Nicholas, Nellie Clare Mawhood, and Mabel B. Trilling, *Art Activities in the Modern School*. New York: Macmillan Co., 1937. Pp. xiv+380. $3.25.

three books in one. It becomes a little bewildering to follow through the immense variety of suggestions for the kindergarten and primary grades, the intermediate grades, the junior high school, and the senior high school for each of the seven different phases of art treated in the book. Art has now reached a status of educational recognition which should warrant the production of separate methods books for each division of the school.

WILLIAM G. WHITFORD

A tested reading program.—It is always gratifying to find guidebooks in a reading series which show evidence of classroom trial. Valuable practical findings are to be expected from an author who has subjected the theory as well as the reading material to actual use.

A series of teachers' guides has appeared for the Unit-Activity Reading Series.[1] The *Guide for the First Year* discusses the changing demands in elementary education, particularly in reading instruction, the materials and procedures in the series from preprimer through the first reader, and techniques for determining and developing reading readiness. A chapter is devoted to almost every topic under which stories are classified in the readers, such as home, city helpers, boats, animals, and birds. These chapters supply concrete descriptions of activities on the topic, detailed lesson plans for each story in the unit, and tests on the new vocabulary. Different procedures are described to meet the needs of schools having activity programs, schools in a transition stage, and schools operating on the conventional basis. The guidebooks for the second and the third years follow the same general plan of organization. Both these volumes include a convenient index.

Among the features worthy of the special emphasis given them in the guidebooks are the following: (1) The reading materials relate to the science and social-studies topics that most frequently form the core of primary curriculums. These topics were determined after careful surveys of recent courses of study in social science recommended by the Bureau of Curriculum Research at Teachers College, Columbia University. Also a few fanciful selections are included in each reader of the series. (2) A scheme of "self-helps" is provided to enable pupils to identify unfamiliar words for themselves. For example, the practice-pads include illustrations of certain words used in the corresponding

[1] Nila Banton Smith, The Unit-Activity Reading Series: *Teachers' Guide for the First Year—"Tom's Trip," "At Home and Away," "In City and Country,"* pp. vi+504, $1.20; *Teachers' Guide for the Second Year—"Round about You,"* pp. 252, $0.88; *Teachers' Guide for the Third Year—"Near and Far,"* pp. 316, $1.00; *"Tom's Trip" in Practice-Pad Form*, pp. 36, $0.36; *Practice-Pad To Be Used with "At Home and Away,"* pp. ii+126, $0.40; *Practice-Pad To Be Used with "In City and Country,"* pp. 96, $0.32; *Practice-Pad To Be Used with "Round about You,"* pp. 96, $0.32; *Practice-Pad To Be Used with "Near and Far,"* pp. 96, $0.32. New York: Silver Burdett Co., 1936 and 1937.

pages in the readers. It is a question, however, whether this device may be used to advantage with such types of pupils as those who fail to use context clues or who have no desire to become independent. (3) Supplementary pamphlets, applying the themes found in the readers, make use of the same vocabularies and thus aid in extending the reading of the individual child. (4) The vocabularies of the readers are carefully controlled, as is shown by the statistical data presented.

It is to be regretted that certain materials in the guidebooks have not been as advantageously arranged as would seem necessary. For example, the material on techniques for determining and developing reading readiness, which is placed at the end of the volume, is likely to be overlooked when it is needed. Again, the suggestions for "unit activities" are likely to be passed over by the teacher who turns first to the part of the guide dealing with the pages of the reader to be used next.

In spite of the present trend toward realistic literature, a basic reading series should probably make more adequate provision than does this series for stories rich in imaginative appeal. However, the guidebooks are richly suggestive of informal reading and of related activities in almost all the school subjects. Since the material has been subjected to classroom trial, almost any teacher will find it easy to follow.

GERTRUDE WHIPPLE

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CURRENT PUBLICATIONS RECEIVED

GENERAL EDUCATIONAL METHOD, HISTORY, THEORY AND PRACTICE

COZENS, FREDERICK W., CUBBERLEY, HAZEL J., and NEILSON, N. P. *Achievement Scales in Physical Education Activities for Secondary School Girls and College Women.* New York: A. S. Barnes & Co., Inc., 1937. Pp. x+166. $2.00.

EFRON, ALEXANDER. *The Teaching of Physical Sciences in the Secondary Schools of the United States, France, and Soviet Russia.* Teachers College Contributions to Education, No. 725. New York: Teachers College, Columbia University, 1937. Pp. viii+296. $2.35.

EISNER, HARRY. *The Classroom Teacher's Estimation of Intelligence and Industry of High School Students.* Teachers College Contributions to Education, No. 726. New York: Teachers College, Columbia University, 1937. Pp. 108. $1.60.

HARAP, HENRY (Chairman). *The Changing Curriculum.* Joint Committee on Curriculum of the Department of Supervisors and Directors of Instruction and the Society of Curriculum Study. New York: D. Appleton-Century Co., Inc., 1937. Pp. xii+352. $2.00.

HARRISON, MARGARET. *Radio in the Classroom: Objectives, Principles, and Practices.* New York: Prentice-Hall, Inc., 1937. Pp. xvi+260. $2.50.

JENKINS, RALPH C., and WARNER, GERTRUDE CHANDLER. *Henry Barnard: An Introduction.* Hartford, Connecticut: Connecticut State Teachers Association, 1937. Pp. 118.

LEE, MABEL. *The Conduct of Physical Education: Its Organization and Administration for Girls and Women.* New York: A. S. Barnes & Co., Inc., 1937. Pp. xxiv+562. $3.00.

LYON, MARGARET CHARTERS. *The Selection of Books for Adult Study Groups.* Teachers College Contributions to Education, No. 696. New York: Teachers College, Columbia University, 1937. Pp. x+228. $2.35.

PUGMIRE, D. ROSS. *The Administration of Personnel in Correctional Institutions in New York State.* Teachers College Contributions to Education, No. 722. New York: Teachers College, Columbia University, 1937. Pp. viii+182. $2.10.

RINSLAND, HENRY DANIEL. *Constructing Tests and Grading: In Elementary and High School Subjects.* New York: Prentice-Hall, Inc., 1937. Pp. xvi+324. $2.85.

WALKE, NELSON SUMTER. *Traits Characteristic of Men Majoring in Physical Education at the Pennsylvania State College.* Teachers College Contributions to Education, No. 735. New York: Teachers College, Columbia University, 1937. Pp. viii+62. $1.60.

WALLENSTEIN, NEHEMIAH. *Character and Personality of Children from Broken Homes.* Teachers College Contributions to Education, No. 721. New York: Teachers College, Columbia University, 1937. Pp. vi+86. $1.60.

What About Survey Courses? Edited by B. Lamar Johnson. New York: Henry Holt & Co., 1937. Pp. xii+378.

BOOKS PRIMARILY FOR ELEMENTARY-SCHOOL TEACHERS AND PUPILS

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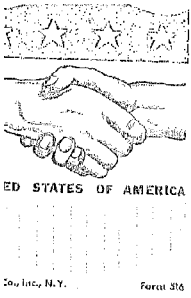

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THE ELEMENTARY SCHOOL JOURNAL

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Educational News and Editorial Comment

SUPERINTENDENT JOHNSON REPLIES

In the "Educational News and Editorial Comment" section of the *Elementary School Journal* for December, 1937, there appeared an item entitled "The Political Dominance of the Chicago Schools." From Dr. William H. Johnson, superintendent of schools in Chicago, and from a number of the teachers in the Chicago schools, we have received letters replying to this news item and editorial comment. It is the policy of the *Elementary School Journal* to open our pages to anyone toward whom criticism has been directed. In fact, we welcome replies of this kind. We have, therefore, secured Superintendent Johnson's permission to publish the essential portions of his letter, which are as follows:

I cannot help but comment on your editorial relating to political dominance of the Chicago schools which also appeared in this same issue. Knowing you as a student of research, I was somewhat amazed to appreciate that you had selected as your primary source of information a cosmopolitan newspaper—without making any effort to secure the facts from my office. Aware also as you must be of the political bias of the *Chicago Daily News*, I am likewise amazed at your giving so much prominence and space to an editorial printed in that paper.

I am sending you under separate cover a copy of the annual report prepared by me for the year 1936. If you will peruse the report and give serious attention to the many forward-looking modifications which have been made in the Chicago school system during the past year and one-half, I am certain that you could not honestly consider the Chicago Public Schools as an organization dominated by politicians. It is a common known fact that past superintendents and past Boards of Education have continually failed to co-operate for the well-being and betterment of the Chicago school system. The present Board of Education has given me every co-operation; it has not in any way interfered with such movements or policies as I have found it desirable to initiate and pursue. Only those teachers and principals who do not enjoy work have anything to fear from the present school administration. The great body of our teachers and principals, including at least 95 per cent of the total number, are a conscientious, hard working, and sincere group. Among them you find no impairment of morale. Insofar as leadership by the superintendent of schools is concerned, let me assure you that that leadership is both positive and definite regarding policies and direction.

We have also received the following letter from J. R. Bayston, who for the past eight years has been a teacher in the Chicago high schools.

DEAR MR. EDWARDS:

Your editorial comment in the December issue of the *Elementary School Journal* pertaining to the Chicago schools seems to be very unfair and without reliable authority.

The statement that the morale of the teachers has been seriously impaired may be true of some of the teachers who were not qualified to teach and were not doing a good job. Naturally they would be worried when an efficient superintendent took office. Their inefficiency MIGHT be discovered.

I am very sure that should utterances, such as come from these teachers, be made by people in industry against their employer, their services would be instantly terminated. Naturally there are only a few teachers in the above class. Why condemn the whole barrel when only a few bad apples are present?

In your second paragraph the statements of the Chicago newspapers are quoted as authorities on Dr. Johnson's plan of vocational education. Since when has the University of Chicago stooped to the point where it takes the press as authority on educational matters? Would such an authority be allowed in a thesis by the University of Chicago? Then why try to cram it down the teachers' throats?

It is certainly too bad that the University of Chicago, noted for its thoroughness of investigation, should jump at conclusions and publish such statements as "80 per cent of the work in the Chicago high schools will be vocational in character." The North Central Association, the labor organizations, and others have approved the plan after a CAREFUL INVESTIGATION OF ALL DETAILS.

I deem it only fair that your magazine, after a careful investigation, publish the facts in an early issue to help offset the damage done to the Chicago schools.

Sincerely yours,

[*Signed*] J. R. BAYSTON

We wish to take this opportunity to correct what seems to be an assumption of Mr. Bayston, namely, that the *Elementary School Journal* speaks officially for the University of Chicago. The *Journal* is in no sense an official organ of the University; editorial opinions expressed in the *Journal* are those of the editor.

THE NATIONAL INTEREST IN THE EDUCATION OF RURAL YOUTH

Evidence is rapidly accumulating that sound social policy requires the extension of more adequate educational opportunity to the rural youth of the nation. The problem of inequality of educational opportunity in this country is essentially a rural problem, and, in the light of reproduction trends and the mobility of population, it is a problem which cannot long be safely ignored.

Two recent publications of the United States Department of Agriculture contain a body of extremely significant information on the economic and the social conditions of rural America. The first of these, prepared by J. C. Folsom and O. E. Baker, bears the title *A Graphic Summary of Farm Labor and Population*. The second bulletin, by O. E. Baker, is entitled *A Graphic Summary of the Number, Size, and Type of Farm, and Value of Products*. From the first bulletin we quote the following significant statement in regard to the farm population.

The farm population of the nation supplies the nonfarm population with much more than food and fibers. During the decade 1920–29 about 40 per cent of the youth who started to work in the factories, offices, and stores of the cities came from the farms—for probably two decades on the average, they had been fed, clothed, and educated by the farming people, and were then provided practically free of cost, to the cities, ready for life's work. (*Footnote in original:* The net migration from farms during the decade 1920–29 was about 6,300,000. If it cost $2,250 to feed, clothe, and educate the average farm child to the age of fifteen—certainly $150 a year is not an excessive estimate; in some states education alone costs this much—then this migration represents a contribution of roughly $14,000,000,000. In addition, settlement of farm estates probably transferred $4,000,000,000 to $5,000,000,000 to heirs who had moved to the cities.)

This contribution appears likely to be even more important in the future than it has been in the past. Ten adults in the large cities (those over 100,000 population) are now raising only seven children. Should the birth-rate fall no farther, these seven would raise only five children, these five only three and a half. In three generations, or a century, number of births in these large cities would decline to about one-third that at present, were there no immigrants from outside, and later population would fall to a similar proportion. In the farm population, on the other hand, ten adults are now raising about fourteen children. Again assuming a stationary birth-rate, these fourteen would raise about twenty children, these twenty about twenty-eight. Population would almost treble in a century, were there no net migration from the farms. Birth-rates probably will continue persistently to decline, rural as well as urban, but if the past forecasts the future the rural decline will be less rapid than the urban.

The significance of these ratios resides in the prospect that 1,000 farm people probably will have three to seven times as many descendants a century hence as 1,000 people living in our large cities—three times as many if the predepression proportion of farm youth leave the farms for the cities, seven times as many if there be no migration from farms.

The cities have an interest in the farm population. If the urban birth-rate continues to fall, the middle-aged and elderly in the cities will become increasingly dependent on the rural regions for youth to do their daily toil. The number of children under five years of age in the urban population has decreased probably 20 per cent during the last ten years, and the number of persons over sixty-five years of age has increased, probably, 50 per cent. According to the present trend in the nation as a whole there will be twice as many people over sixty-five years of age twenty-five to thirty years hence as there are today, and about three times as many fifty years hence. These people are living now, and the number can be estimated within a small error by using life-expectation tables. Such an estimate assumes freedom from war, famine, and pestilence.

The nation as a whole clearly has an interest also in the rural population for, in all likelihood, most of the citizens a century hence will be descendants of the rural people of today. Among the rural people the birth-rate generally is highest, and doubtless will remain highest, among people living in the less fertile areas. Apparently, the people who will provide, immediately or eventually, the surplus youth to the cities, and to the farms and villages in the more fertile areas from which the youth have gone to the cities, will be principally the mountaineers of the southern Appalachians and the Ozarks, the less commercial farmers of the Cotton Belt, the miners of Pennsylvania and West Virginia, the hill folk along the Ohio River and its tributaries, the pioneers of the upper Great Lakes region, the Mennonites and similar foreign stocks of the Dakotas and Kansas, the Mormons of Utah and Idaho, and other, mostly small, and often more-or-less self-sufficing farmers, who have been partially isolated by their environment or other conditions from the influences of modern urban civilization.

Whether the youth who migrate from these areas to the cities and the better

farming regions will be educated and prepared for life's labors, or will remain more or less ignorant and unskilled, joining in large numbers the groups of the unemployed, will depend not only upon local resources, and school facilities which are generally meager, but also upon national policy. These youth in the poorer regions constitute a great national problem, but also a great national resource.

How best to conserve and use this basic resource of the nation is not yet clear. The need is urgent, with more than a million survivors of the back-to-the-land movement during the depression still on farms in these regions January 1, 1935, and with another million or more youth backed up on farms in these regions who would under predepression conditions have migrated to the cities. In some counties in these regions a third to a half of all the families were on relief on that date. Education, both of children and adults, appears to offer the greatest hope; but more than education is needed.

During the early years of the depression the movement of rural youth to cities was checked; approximately two million persons were "backed up on farms" who, under normal conditions, would have sought economic opportunity in cities. At the same time there was a back-to-the-farm movement of large proportions; hundreds of thousands of the unemployed took refuge in the country, in the homes of relatives or friends, on abandoned farms, or on small tracts of land that they were able to purchase. In 1935 approximately two million of these back-to-the-land migrants were still living on farms. The result was an increase in the number of farms by approximately a half-million; "between 1930 and 1935 the number of farms of three to nine acres increased nearly 70 per cent, and farms of ten to nineteen acres increased 22 per cent."

The increased number of youth who have found it necessary to remain on the farm, together with those who sought refuge on the land during years of economic stress, have tended to increase the number of farmers with a limited income. Even before 1930, however, the gross income of a large percentage of farm families was appallingly low. The extremely low income of farmers in certain areas explains in large part the inadequate support given to education and other public services in these areas. The following statement with respect to the value of farm products is quoted from the second bulletin mentioned in a preceding paragraph.

It may be said of American agriculture that one-half the farmers do not know how the other half lives. Approximately half the farmers in 1929, a good

year, produced less than $1,000 worth of products, including those consumed by the farm family. This less productive half of the farms produced only about 11 per cent of the products "sold or traded" to use the census phrase. Probably the more productive half of the farms in a few years could be brought to the point of producing this remaining 11 per cent if prices of farm products afforded encouragement. Half the farms of the nation are not needed to feed and clothe the nonfarm people. But these less productive farms, measured in food and fibers, are contributing an increasing proportion of the citizens of the future, for the birth-rate of the people on these farms is high.

Two-thirds of these less productive farms are in the South, where they constitute about two-thirds of all farms. Many more are located in Missouri, southern Illinois and Indiana, Ohio, Michigan, the cut-over lands of northern Wisconsin and Minnesota, in the Northeastern States, in New Mexico and Arizona. The population is dense and the pressure on the soil resources is heavy in many of these areas. A resumption of the migration of youth from these regions is now in progress. Undoubtedly the cities will absorb many of these migrants, but owing to progress in use of machinery—wage-earners in manufacturing have been decreasing since 1925—it is doubtful whether the cities will absorb as many in the future as in the past. An increasing number will probably find employment in northern and western agriculture, first as wage hands and later as tenants. A few eventually will become owners.

Over one-fourth of the farms of the nation in 1929 produced an average of less than $600 worth of products. The typical peasant farm of northern Europe produces more than this—it produces probably nearer $1,000 worth of products. Fifteen per cent of the farms—nearly 1,000,000—produced less than $400 worth of products. This is approaching the Chinese level of production. Less than 200,000 of these were part-time farms. More than 3,000,000 rural people in that fairly prosperous year, living on the three-fourths of a million farms that produced less than $400 worth of products each, evidently had an income averaging about $100 per person.

On the other hand, 19 per cent of the farms produced over $2,500 worth of products. This one-fifth of the farms produced over three-fifths of the "products sold or traded." These farms are located mostly in the Dairy Belt, the Corn Belt, the wheat regions, and the valleys of the far West, with a few in Texas and Oklahoma.

Natural conditions and economic and social factors have led to the development of two agricultural countries in the United States—a country characterized in general by poverty and a country characterized in general by comfort. As tenancy and mortgage debt have increased, there has been a tendency to extend the borders of the country characterized by poverty.

Advancement in the Education of Rural Teachers

A recent issue of *School Life* carries a statement by Walter H. Gaumnitz, senior specialist in rural education of the United States

Office of Education, which indicates that during the past few years there has been a notable improvement in the professional training of

TABLE 1

COMPARISON IN PER CENT OF THE TRAINING OF TEACHERS OF SMALL RURAL SCHOOLS IN 1930 AND 1935

	Four Years or Less of High-School Training		Two Years or More of College Training	
	1930	1935	1930	1935
One-room teachers:				
White	44.1	22.5	24.0	42.8
Negro	75.2	45.9	13.0	33.3
Total	45.9	24.2	23.2	42.2
Two-room teachers:				
White	36.0	12.5	39.0	65.5
Negro	64.4	39.0	16.1	38.1
Total	39.5	17.1	36.4	60.9

TABLE 2

TRENDS IN SCHOLARSHIP PREREQUISITES FOR CERTIFICATING BEGINNING TEACHERS FOR THE ELEMENTARY SCHOOLS

MINIMUM SCHOLARSHIP PREREQUISITES	NUMBER OF STATES			
	1921	1926	1930	1935 (September)
High-school graduation and 4 years of training of higher grade	0	0	0	3
High-school graduation and 3 years of training of higher grade	0	0	2	8
High-school graduation and 2 years of training of higher grade	0	4	5	13
High-school graduation and 1 year of training of higher grade	0	9	11	8
High-school graduation and some professional training, but less than 1 year	4	14	13	3
4 years of secondary school (may or may not include professional courses)	14	6	5	5
No definite minimum scholarship requirement stipulated	30	15	12	8

rural teachers. In 1930, 44 per cent of the white teachers and 75 per cent of the negro teachers in one-room schools had not gone any

further than the high school; five years later the corresponding percentages were 23 and 46 (Table 1). There was, during this same period, a marked increase in the percentage of one-room teachers who had completed two years or more of college training; for white teachers the percentage rose from 24 in 1930 to 43 in 1935, and for negro teachers from 13 to 33. The improvement in the education of teachers in two-room schools was even more marked. In 1930, 36 per cent of the white and 64 per cent of the negro teachers in two-room schools had had four years or less of high-school training; by 1935 these percentages had dropped to 13 for white teachers and to 39 for negro teachers. During the depression years, too, a number of states raised materially the scholarship prerequisites for the certification of beginning teachers in the elementary school (Table 2). At the present time more than half of the states require of the beginning teacher at least high-school graduation plus two years of normal-school or college work.

The low salaries paid rural teachers make it difficult for the rural school to attract and hold teachers of ability. On this point Mr. Gaumnitz comments as follows:

> The annual salary of the median teacher in one-room schools, for example, was $517 in 1935; that of the median teacher in two-room schools was $620. Below these ranged some 12,000 teachers of small rural schools who received less than $300 per year; fully 6,000 of whom received less than $200. These salaries assume even greater significance when compared with the situation in the larger cities. Over a long period of time the salaries in the smaller rural schools have ranged from one-half to one-third the amount paid in the city schools. During the same period the disparities between the salaries of rural and city teachers have grown wider. In good times salary increases in rural schools have lagged behind those in city schools; in hard times the salaries of the former have fallen both faster and farther than of the latter.

Here and There among the Schools

The Minneapolis plan of radio broadcasting.—The following account of the program of radio broadcasting which has been put into operation in the Minneapolis public schools should be of interest to school superintendents, principals, and teachers. It was prepared for us by Miss Prudence Cutright, assistant superintendent of schools.

> Participation of the Minneapolis public schools in radio broadcasting for educational and entertainment purposes was placed on a centrally organized and supervised basis with the opening of the current school year.

The educational aspect of the activity has been the major consideration of the school system, and the co-operating radio stations have apparently been well pleased with the arrangement.

Under the present plan, which has operated successfully to date, the school system presents, or is primarily responsible for, the talent and the script on six types of programs given over four Minneapolis radio stations. Four of the programs are given weekly, one semi-weekly, and the remaining one each school day.

Objectives of the centralized organization under the Board of Education's Division of Instruction are: so to plan and prepare the broadcasts as to make them of practical educational experience to the pupils and the educators taking part; to provide a variety of programs which will represent the educational scope of the Minneapolis schools and be of broad interest and great benefit to the listeners; so to divide the work among participating schools and individuals as to distribute responsibility, opportunity, and credit; to protect pupils and teachers from too pressing demands on time and effort from the radio stations or from other organizations.

Programs generally have been arranged for through conferences of radio-station officials with Assistant Superintendent Prudence Cutright, in charge of instructional activities, and the school system's audio-visual education committee, headed by Louis G. Cook, principal of Edison High School.

Through the committee, a co-ordination service is in operation to avoid duplication of material and to aid in the preparation of scripts and the handling of rehearsals.

Every effort is made to provide sufficient time to make the broadcasts an outgrowth of school and classroom activities. Thus, before each "News X ray" broadcast, carefully prepared mimeographed outlines and reference material are distributed to social-studies classes for study before and after the broadcasts.

At present the following programs are being given with pupil participation. Each of these programs is fifteen minutes in length.

Station WCCO—Each Tuesday at 2:30 P.M., "News X ray." Comments on significant current news by station speaker on the basis of topics suggested by social-studies teachers and pupils. Social-studies pupils listen in their classes and later discuss the material. Teachers and the supervisor of instruction co-operate with the commentator in preparation of the script.

Station WTCN—Each Wednesday at 4 P.M., "Uncle Bob's Club of the Air." Various aspects of the field of chemistry are presented in dramatized form by pupils and teachers of Washburn High School. These materials are arranged in nontechnical form to interest persons outside the educational field.

Station KSTP—Each Thursday at 1:15 P.M., "Learned by Living." Pupils of various schools present, in different ways, insights into the subject fields, such as music, domestic science, art, drama, and social studies.

The following programs are given with participation of persons other than pupils.

Station KSTP—Each Monday and Thursday at 7:25 A.M. Superintendent Carroll R. Reed speaks for five minutes on educational topics of his own selection. Superintendent Paul S. Amidon, of St. Paul, speaks during the same period on Tuesdays and Fridays, and Wednesday is used for items of school news.

Each Thursday at 4 P.M., "Journal School Forum." Under the sponsorship of the *Minneapolis Journal*, members of the instructional personnel are assigned by Superintendent Reed to give fifteen-minute talks for one month each on topics related to their fields of work in the school system. Talks are printed in full in the *Journal's* succeeding Sunday issue, and some series have been printed in booklet form by the *Journal*. This program is in its second year.

Station WDGY—Each school day at 8:45 A.M., "School News." This ten-minute broadcast, given from the Board of Education offices by the board's Public Information Office, presents news of the central board offices, schools, and parent-teacher associations and emphasizes the breadth of the modern school's educational services. Guest speakers are used from time to time.

Stations KSTP and WTCN are affiliated with the National Broadcasting Company, Station WCCO with the Columbia chain, and WDGY with the Mutual system.

In addition to these regular programs, Superintendent Reed or other members of the administrative and instructional personnel occasionally are guest speakers on radio broadcasts.

The Division of Instruction makes a determined effort to prevent the schools' being drawn on indiscriminately for radio services which may interfere with school work. When the Minneapolis public schools had only one or two regular programs, they were largely at the mercy of organizations seeking radio talent on the pretext that, if some pupils were used for radio work, others should also be allowed to appear. Now, with a rather full program which is organized and continuous, school authorities feel not only that they are making the wisest use of the opportunities of radio but that they are in an excellent position to forestall unwise use of school talent.

Substituting a principal-teacher conference plan for a teacher-rating plan.—Last year Superintendent S. M. Stouffer, of Wilmington, Delaware, introduced into the schools of that city a new measure designed to improve teachers in service. Experience had indicated that the teachers' rating scale in use was not working satisfactorily. Because this rating scale was tied up with the salary schedule, it was felt that it did not make for friendly, helpful, and sympathetic relationships between the teacher and the supervisor. It was also felt that the existing practice of rating tended to create unpleasant relationships among teachers themselves. For these reasons it was de-

cided to discontinue the practice of rating teachers and to substitute what is known as the "principal-teacher conference plan."

The new plan called for the appointment of a committee, representative of all groups, to prepare a list of qualities, traits, or abilities that are generally considered necessary for good teaching. A form containing the findings of the committee was to be prepared and given to each teacher with appropriate suggestions as to how he might use it in his professional development. This evaluation blank was to be nothing more than a check list against which a teacher might measure his professional improvement.

The plan calls for a semiannual conference between each teacher and his supervisory officer, when the teacher's progress during the semester will be reviewed. It is not the purpose of this conference to rate teachers or in any way to compare one teacher with another. The whole purpose of the interview is to build up friendly, helpful, and sympathetic relations between principal and teacher and to give the teacher an opportunity to make suggestions to the principal which, in the teacher's opinion, will promote the best interests of the school. After the conference the principal prepares a short memorandum setting forth the main points discussed. One copy of this memorandum is filed in the principal's office, one is sent to the superintendent's office, and one is sent to the teacher.

Systematic promotion of community understanding of school problems and activities.—There come to our desk numerous illustrations of the efforts that are being made in many places to cultivate a wholesome, co-operative relationship between the school and the community. We have selected two of these for comment at this time.

The teachers of Forest Park, Illinois, have begun the publication of a quarterly bulletin known as the *Forest Park Teacher*. William M. Shanner, editor of the bulletin, describes its general purpose in an editorial which appears in the first number.

The content of the bulletin will deal with all phases of school work. In addition, guest articles written by nationally known persons who are recognized as authorities in their respective fields will appear from time to time. Such articles will set forth the philosophy and ideals which the teachers themselves hold to be basic to a system of education. Various articles explaining room activities or various units of instruction carried on by different teachers will also be included. Reports of teachers' meetings and committees will be printed in the bulletin.

At present a special committee of teachers is studying over five hundred different report cards that are used in various schools with the view of finding a new report card that will be well adapted to the Forest Park public schools. The report of this committee will appear in a later issue. Investigations of various sorts will be made and printed. In the near future, it is hoped to study the causes of absence from school in Forest Park with the idea of finding remedies to the absentee problem. Two investigations are reported in this issue. One study deals with a comparison of the cost of textbooks under the purchase plan with the cost under the rental system. The other report deals with the costs of education per child for Forest Park and the nation as a whole. A final section of the bulletin will be devoted to titles and reviews of various books which are of great value and importance to parents and teachers alike. For the most part these books are to be found in the Forest Park Public Library.

Finally, it should be repeated that the intent of the teachers in publishing this bulletin is to inform the parents of the activities of the school in the hope of enabling the parents and teachers to co-operate in a more efficient manner for the better education of the children of Forest Park.

Richard E. Tope, superintendent of schools in Grand Junction, Colorado, reports the successful use of a monthly mimeographed bulletin which he describes as strictly professional and educational in nature. Each issue contains a number of brief items designed to inform parents of the activities of the schools and to stimulate critical thinking about school problems.

Problems of Elementary-School Principals

The following statement is quoted from a recent issue of the *New York Sun*.

The chief problems facing elementary-school principals today concern what to teach, how to make the best use of teachers, and when to promote pupils from one grade to another.

A report to this effect was presented . . . . before the meeting of the Associated Academic Principals at their meeting here by Dr. Leo J. Brueckner, in charge of the survey of elementary education for the Regents' inquiry into the character and cost of public education. Dr. Brueckner is a member of the faculty at the University of Minnesota.

"These three—curriculum, supervision, and promotion—headed the list of problems sent the inquiry by more than 400 elementary principals in the state," Dr. Brueckner said. "They had been asked to list 'the major problems which cause the most concern in the administration of your school.' Replies from 419 principals were received, and of the 799 problems they reported, 246 dealt with curriculum, 134 with supervision, and 129 with promotion."

The material problems of elementary schools, such as plant and equipment, drew only 93 in the total of 799, Dr. Brueckner told his audience.

"It was also interesting to note," he said, "that problems of pupil behavior, such as illegal absence, delinquency, and discipline, were listed infrequently, as were also inadequacy of health and playground facilities. However, in the smaller places, the care of physically handicapped children was of major concern."

Dr. Brueckner reported that the adaptation of instruction to individual differences in pupils led all others in the curriculum problems.

"The differences among pupils in mental ability, interest, and special aptitudes demand flexible instruction," he said. "The principals are equally aware of the need to adapt the curriculum to changing economic and social conditions.

"Supervision, or how to make the best use of teachers, was second only to curriculum in the principals' replies. Many indicated the need of clerical help to give them time for adequate supervision. Promotion policies came third, and the questions involved here are indicated by some of the replies: 'Should pupils be failed at all?' 'By what standards can one determine whether a pupil is ready for the next grade?'

"Inadequacies of school plant was fourth. Such items as poor buildings, lack of equipment, unsatisfactory libraries, and inferiority of instructional supplies were listed by thirty-eight principals. Overcrowding of schools was reported thirty times."

The remainder of the replies on problems dealt with personnel needs and relations to the public and agencies of control.

Municipal Authority To Regulate the Residence of Teachers

In a decision recently handed down by the Supreme Court of New York, it was held that the municipal authorities of New York City cannot enforce an ordinance which requires teachers in the New York school system to reside in the city. The following excerpt from the opinion of the court was quoted in the *New York Sun*.

"The inference to be drawn from these decisions seems to be as follows: In the delegation of certain state functions, like those of police and health, the legislature has conferred autonomous powers upon the corporation of the city of New York to carry on and administer this function. Officials and employees of boards administering these functions are therefore local officials and employees under the direction of the city of New York.

"In the delegation of the function of education, however, the legislature has delegated the local power not to the corporation of the city of New York but to a separate corporation known as the Board of Education. To that corporation alone are the teaching and supervising officials subject to control.

"While the city is custodian of the funds, for educational purposes the Board

of Education has power to administer the funds and control the members of the teaching and supervising staff without interference by the city authorities. While the power to pass a local residence law applicable to the teachers would seem to be within the Board of Education of the City of New York, subject perhaps to review of its propriety by the state commissioner of education, no power to make any such regulation exists in the local legislative assembly."

The reasoning of the court in this case is in line with a large number of cases involving the authority of municipal governments to regulate and control education. It is commonly held that education is a function of the state and in no sense an implied function of municipal government. The state legislature may, to be sure, confer upon city governments such authority over the schools as policy may seem to dictate, but, in the absence of such expressly granted authority, municipal control over education will be denied. Thus it has been held that a city may not spend municipal funds for the support of education unless specifically authorized to do so, that a city cannot exercise its police power over school buildings in the absence of specific statutory or charter authority, and that municipal control of school finance must be exercised strictly in accordance with the power expressly conferred upon the city.

The Effectiveness of the Radio as an Instrument of Classroom Instruction

There is, both in this country and abroad, a growing interest in the use of the radio as an educational instrument. As yet, however, relatively little experimental evidence has been made available on the effectiveness of the radio as an instrument of classroom instruction. A timely investigation of the subject has been conducted for the Australian Council for Educational Research by Malcolm E. Thomas. The results of the investigation have been published in a volume entitled *An Enquiry into the Relative Efficacy of Broadcast and Classroom Lessons* (Melbourne University Press, in association with Oxford University Press, London and New York). The classroom subjects covered in the investigation are geography, history, arithmetic, English usage, and nature-study. The primary aim of the study "was to determine whether a broadcast lesson or an oral lesson in topics chosen from each of the subjects named is the more effective means of instruction to fourth and fifth classes."

The conclusions of the investigation are summarized by Mr. Thomas as follows:

The conclusion reached upon the major question of this study, namely, whether the broadcast lesson is a more effective means of instruction than is the ordinary oral information lesson, is as follows:

Under the conditions laid down in this report, the results showed no significant differences between the effectiveness of broadcast lessons and oral lessons in English, nature-study, arithmetic, and history.

The obtained differences, although insignificant, manifested a definite tendency to favor the control groups.

In the case of geography the control or oral-lesson group had a significant difference in its favor over the experimental group.

Upon considering the effectiveness of lessons in terms of delayed recall, the following conclusions were reached:

The results of the "delayed tests" showed that no significant alteration had taken place in the situation as revealed by the "immediate tests."

There was a tendency, however, for the experimental groups in English and geography to retain the effects of the broadcast lessons to a greater degree than did the control groups retain the effects of the oral lessons. In nature-study and history the control groups tended to retain the effects of the oral lessons better than did the experimental groups.

In regard to the subsidiary problems, which are involved in the general question of the efficacy of school broadcasting, conclusions have been drawn with reference to method, sex differences, significance of age and grade, and the story.

1. *Method.*—The results in English seem to confirm those in nature-study, and to suggest that the slight tendency for the oral lessons to be more effective than the broadcast lessons is not altered, to any significant extent, by variations in methods of the type carried out in this investigation.

2. *Sex differences.*—If any conclusion may be hazarded from these conflicting and indeterminate results, it is that the comparative efficacy of the broadcast lessons of the type in this investigation bears no relation to the sex of the children taught.

3. *Significance of age and grade.*—The results are indeterminate and apparently contradictory. In the light of these results, however, there seem to be no grounds for thinking that the efficiency of broadcast lessons varies from class to class in the middle of the primary school.

Furthermore, the evidence here presented would suggest that there is no reliable difference in the amount of benefit derived by children at 9+ and 10+ years of age respectively from listening to broadcast lessons in arithmetic.

4. *The story.*—The further question was raised as to whether the fact that the wireless confined the channels for the acquisition of knowledge to one mode of perception had any marked effect upon the efficacy of the broadcast lesson. Upon this question the results indicate that the group, which saw and heard the

narrator in person, had a slight but insignificant advantage in terms of facts recalled over the parallel group which listened to her voice "on the air."

5. *Results other than statistical.*—Invariably the teachers were of the opinion that the classroom lesson was more effective than the broadcast lesson. Thus professional opinion and experimental results tally closely, but conclusions drawn from the experimental data are less in favor of oral lessons than is opinion expressed by teachers.

The University of Chicago Luncheon at Atlantic City

A University of Chicago luncheon, instead of the dinner formerly given, will be held during the meeting of the American Association of School Administrators, at Chalfonte-Haddon Hall, Atlantic City, New Jersey, on Wednesday, March 2, 1938, at 12:15 P.M. Alumni, former students, and friends of the University are most cordially invited to attend. Tickets, at the rate of $1.50 each, may be secured from Professor Robert C. Woellner, University of Chicago.

Who's Who in This Issue

Lester A. Kirkendall, associate professor of education at the Teachers College of Connecticut, New Britain, Connecticut. Clarence R. Stone, author and editor of textbooks and professional books on education. Roy W. Feik, superintendent of schools at East Chicago, Indiana. Foster E. Grossnickle, professor of mathematics at State Teachers College, Jersey City, New Jersey. Frank T. Wilson, instructor in educational psychology at Hunter College of the City of New York. Cecile White Flemming, director of individual development and guidance at Horace Mann School of Teachers College, Columbia University. Agnes Burke, first-grade teacher at Horace Mann School and associate in nursery-school and kindergarten–first-grade education at Teachers College, Columbia University. Charlotte G. Garrison, assistant principal of the kindergarten of Horace Mann School and instructor in nursery-school and kindergarten–first-grade education at Teachers College, Columbia University. Douglas E. Lawson, assistant principal of Brush Training School of Southern Illinois State Normal University, Carbondale, Illinois. William C. Reavis, professor of education at the University of Chicago. Nelson B. Henry, associate professor of education at the University of Chicago.

THE INFLUENCE OF CERTAIN INCENTIVES IN THE MOTIVATION OF CHILDREN

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A class in child psychology, studying the incentives used to motivate children, raised the question how to discover which incentives really serve as the strongest motivating factors. Out of this question came a project for developing a questionnaire to study the incentives which motivate children. This instrument was developed co-operatively by the class and the instructor. Items were used which would permit the pupils to choose the stronger of two incentives.

The questionnaire was constructed to fit the vocabulary level of elementary-school pupils. Standard directions for administration were developed to secure uniformity and, more important, a feeling of rapport which would insure the sincere co-operation of the children. The questionnaire was administered to the children by the writer and members of his class. Assurance was given that the questionnaire was not a test, that no marks were to be given, and that the results were to be used only in group form by students in the college class.

The questionnaire was given to 284 pupils in Grades IV, V, and VI of schools in New Britain. Only a small number of fourth-grade pupils were included. Table 1 shows the distribution of the pupils according to chronological age.

After the first administration to two sixth-grade classes with a total of approximately seventy pupils, the results were tabulated. It was found that, for most items, the first of the two alternate responses was answered with greater frequency than the second response. It was thought that priority of position might be influencing the pupils to mark the first response. The questionnaire was remimeographed with the order of the responses reversed. The second administration showed majorities for the second-position responses comparable to the majorities given these responses when they were

in first position. This result would indicate that the pupils were really reasoning in marking their responses. The questions in the final form of the questionnaire and the percentages of boys and girls checking each answer are shown in Table 2.

The percentages of the pupils at successive age levels who marked various responses were studied, but little evidence of a relation between age and the marking of the items was found except as noted in the following discussion.

The percentages in the table for Item 1 indicate that a definite challenge to the pupil to reach higher levels of achievements than he has been reaching is a greater incentive than an effort to spur him

TABLE 1

DISTRIBUTION, ACCORDING TO AGE, OF 284 PUPILS IN GRADES IV V, AND VI WHO ANSWERED QUESTIONNAIRE ON MOTIVATION

Age	Number of Pupils	Age	Number of Pupils
9	20	13	11
10	91	14	1
11	118	15	1
12	42	Total	284

to more strenuous efforts by making disparaging comparisons. There was some evidence, however, that this difference might not hold for the higher age levels. Older pupils may become more sensitive to disparaging comparisons. The percentages marking the first response at successive age levels were: nine years, 30 per cent; ten years, 30 per cent; eleven years, 36 per cent; twelve years, 50 per cent; and thirteen years, 45 per cent.

Item 2 shows that short, easy lessons are far less effective in motivating than are opportunities to make application of the knowledge gained. Item 23 also indicates the potency of personal satisfaction as a motivating device.

Item 4 gives an interesting reaction to the effect of scolding. A large proportion of the pupils feel that they would work harder after being scolded. Possibly this result occurred because the pupils, coming from schools where progressive methods have practically eliminated scolding, feel that a scolding is a major punishment. It is

TABLE 2

QUESTIONNAIRE ON MOTIVES ADMINISTERED TO 152 BOYS AND 132 GIRLS IN GRADES IV, V, AND VI AND PERCENTAGE CHECKING EACH ANSWER

Item	Percentage Checking		
	Boys	Girls	Both
1. I would study hardest on a lesson if my teacher told me that:			
a) Usually younger pupils do this work and I surely should be able to do it	34	38	36
b) Usually this work is done only by older pupils but she thinks I can do it	66	62	64
2. I like to study best when my teacher makes me feel that:			
a) The lesson will be short and easy	26	26	26
b) I can use the knowledge in some interesting thing I am doing	74	74	74
3. I would study hardest on a lesson in which I knew:			
a) The teacher would only ask questions of members of the class	20	27	26
b) I was to make a report before the class	80	73	74
4. When the teacher has scolded me for doing poor work, I feel:			
a) Like doing no more work in the subject	15	9	12
b) Like working harder so I will do better next time	85	91	88
5. I think I would study hardest when I had been promised that I could:			
a) Have a longer gym period in which I could play games I like	45	72	57
b) Get out early to see the school team play football or basketball	55	28	43
6. Suppose you have done something wrong and the teacher has made fun of you before the class. How would you most likely feel?			
a) Angry that the teacher has scolded you before the class	28	14	21
b) Sorry that you have misbehaved	72	86	79
7. Suppose you have done something to disturb the other members of the class. Which would make you feel more sorry?			
a) To have your classmates disapprove of what you have done	25	30	27
b) To have the teacher tell you that you have done wrong	75	70	73
8. I think I would behave best if I were:			
a) Told that misbehavior would result in punishment	18	26	22
b) Trusted and put upon my honor	82	74	78
9. I think I work hardest in school when:			
a) I like the teacher with whom I am working	76	75	75
b) I may be punished if I do not work	24	25	25
10. For which reason would you most likely try to be at school on time?			
a) It would spoil the good attendance record of your room	72	84	79
b) Pupils who are tardy have to stay in at recess to make up the time	28	16	21
11. If some of the pupils in my room were contesting against some others in the room, I would work hardest if:			
a) The boys were in one group and the girls in another	44	37	41
b) Each group had both boys and girls in it	56	63	59
12. I would study hardest:			
a) If I was in a contest and my group was trying to beat another one	18	17	18
b) For a high mark on a test	82	83	82

TABLE 2—*Continued*

Item	Percentage Checking		
	Boys	Girls	Both
13. If I am in a contest I work hardest when:			
a) My group is a little ahead	28	28	28
b) My group gets a little behind	72	72	72
14. Suppose you had written an especially good composition in English. Which would you like better?			
a) To be given some reward by your parents	36	34	35
b) To have the theme, or composition, displayed in a school exhibit	64	66	65
15. When I prepare my lessons, I prefer to:			
a) Leave the hard part to the last	25	22	23
b) Do the hardest parts first	75	78	77
16. For which of the following reasons would you study hardest?			
a) To get a prize if you pass the work this term	14	8	11
b) To make good marks so you could hold a good job when you are out of school	86	92	89
17. I study hardest when:			
a) There is to be an examination soon	80	86	85
b) My teacher praises me	20	14	15
18. As a reward for hard study in school I would prefer to have time given for:			
a) Some interesting thing I might do by myself, as reading or drawing	62	61	62
b) A contest of some kind	38	39	38
19. Suppose as a punishment for some misconduct at home you were given your choice of two punishments. Which would you choose?			
a) To work at something, such as mowing the lawn, for fifteen minutes	87	59	74
b) To sit quietly in a chair for fifteen minutes	13	41	26
20. In case of misconduct at home, suppose your mother scolded you. Would you most likely feel:			
a) Sorry for what you had done?	61	61	61
b) Angry that you had been scolded?	39	39	39
21. Suppose your father scolded you. Would you most likely feel:			
a) Angry that you had been scolded?	11	4	7
b) Sorry for what you had done?	89	96	93
22. Suppose you are punished at home. Would you prefer to be punished by:			
a) Father?	28	17	23
b) Mother?	72	83	77
23. Which pleases you more when you have made good marks?			
a) To be given praise before the class	17	14	15
b) To know yourself that you have done good work	83	86	85
24. For which would you work hardest?			
a) Money to spend as soon as you earned it	3	7	5
b) Money to put into savings	97	93	95
25. I am most likely to study hardest after my teacher:			
a) Praises me	34	32	33
b) Scolds me	66	68	67

probable that frequent scolding would be much less effective than the answers of these children indicate. There is an indication that the boys react less favorably than the girls to scolding, for 15 per cent of the boys and only 9 per cent of the girls say that they would feel like doing no more work. Item 25 may also be interpreted in light of this discussion.

Item 5 is interesting chiefly in showing that only 45 per cent of the boys would prefer a longer gymnasium period to early dismissal for a game, while 72 per cent of the girls express such a preference. This result probably reflects the difference in the interests of boys and girls and also perhaps the influence of a school organization which gives the boys more opportunity for gymnasium activities than the girls.

The reaction to ridicule when used by the teacher is tested in Item 6. It is interesting to compare these results with Item 4. Again evidence indicates that boys are less willing than girls to accept disparaging comments.

The meaning of the results of Item 7 affords interesting speculation. Do they mean that the pupils value adult, and especially teacher, opinion much more than they value the opinion of their peers? Or do they reflect the dominant place of the teacher in the educational system despite the use of progressive methods of education?

Item 8 should be encouraging to teachers who are attempting to use modern methods of discipline and control. Girls again seem a little more in fear of punishment than boys. The results of Item 9 indicate that a desirable and likable personality in the teacher is a much better incentive than punishment.

In Item 10 the pupils much preferred the positive to the negative method of promoting pupil punctuality. The boys are not so likely as are the girls to be motivated by a desire to uphold a good attendance record. This finding may be a reflection of a greater sensitivity to the pressure of group or teacher opinion on the part of the girls or possibly an expression of greater docility on their part.

In answering Item 11, the boys showed a little greater preference for segregation on the basis of sex in contests. However, the differ-

ence is small, and a majority of both boys and girls prefer mixed groups for contest purposes.

Both Items 12 and 17 reflect clearly the effect of marks and examinations. Whether desirable incentives or not, they are effective when compared with contests or praise. It was interesting to find that examinations seem less effective as a motivating force with increasing age. While 100 per cent of the nine-year-old pupils replying marked examinations as most effective, but 86 per cent of those ten years of age, 83 per cent of those eleven years, 76 per cent of those twelve years, and 55 per cent of those thirteen years so marked examinations. The writer sees no logical explanation for a decrease in the motivating power of examinations with an increase in age.

The results on Item 14 may be affected by the fact that some pupils did not know the meaning of "composition." However, since the word "theme" is used synonymously, lack of understanding of "composition" should have little effect. Public display of work as an incentive seems preferable to a reward from the parents, and the effectiveness of a reward decreases markedly with increasing age. In the case of the nine-year-old pupils, a reward from parents was marked as most effective by 65 per cent; ten-year-old pupils, by 37 per cent; eleven-year-old pupils, by 31 per cent; twelve-year-old pupils, by 26 per cent; and thirteen-year-old pupils, by 27 per cent. This decrease may, however, be a chance result since the number of nine-year-old pupils who marked the questionnaire was small.

Item 16 offers an interesting result. Many persons would doubt that a future job would offer effective motivation, especially to pupils in the elementary school. It is possible that the pupils marked this item as they did because they felt that the second response was the socially desirable one. The reference to marks in the second response may also have influenced the results.

Item 19 shows the most marked difference of any item in the percentages of boys and girls marking the responses. Both boys and girls were favorable to some form of activity as punishment in preference to sitting quietly, but the boys showed a much stronger preference for activity. It is probable that the activity suggested has

much to do with this difference, for mowing the lawn is much better suited to the temperament and the strength of boys than of girls.

An interesting comparison is offered by Items 20 and 21. The percentages of both boys and girls expressing sorrow at receiving a scolding from their father are much larger than those expressing sorrow at receiving a scolding from their mother. While the percentages are exactly the same on Item 20, the percentage of boys (on Item 21) who express anger at receiving a scolding from their father exceeds by 7 the corresponding percentage of the girls. Do these children esteem their father more highly than their mother? Do boys esteem their father less highly than do girls? It is the writer's belief that neither of these suppositions is true for these items. Rather, the definition of "sorrow" held by the children may explain the answers. One wonders whether the children thought of sorrow as remorse or whether they were sorry in the sense of "smarting" under a scolding for their misconduct. Item 22 supports this hypothesis in that a far larger majority prefer punishment from their mother. However, a larger percentage of boys than of girls prefer punishment from their father.

The most pronounced difference in the percentages on the two responses is found in Item 24. Again the evidence points to the strong effect of foresight of the future as a motivating force. The marked difference in the responses led the writer to confer with the administrators of the schools where the questionnaire was given. In these schools a thrift or savings plan is a regular part of the school program. In the writer's estimation this fact accounts for the emphasis on savings, although the school authorities did not agree with this opinion. It is possible also that the effects of the depression have made the pupils more conscious of the value of thriftiness and saving than they would otherwise have been.

The reliability of the questionnaire was tested by repeating it with a group of seventy-nine pupils one week after the first administration. The number of changes in response on the two administrations was taken as an indication of the reliability. Item 7 showed the lowest reliability, 31 per cent of the pupils answering differently on the second administration. Item 18 was answered differently by 24

per cent of the pupils, Item 25 by 23 per cent, Items 1 and 10 by 22 per cent, and Item 12 by 21 per cent.

The highest reliability was shown by Item 24. The percentages of pupils answering differently on the most reliable items were: Item 24, 3 per cent; Item 20, 8 per cent; Items 3, 4, and 6, 9 per cent; Item 22, 10 per cent; Items 16 and 23, 11 per cent; Items 14 and 15, 12 per cent; Items 8, 11, 19, and 21, 13 per cent.

When the items are arranged in descending order of the differences in the percentages on responses, the following order is obtained: 24, 20, (3, 4, 6),[1] 22, (16, 23), (14, 15), (8, 11, 19, 21), 2, 17, 9, (5, 13), 12, (1, 10), 25, 18, 7. When the reliabilities of the differences of these percentages were obtained, all showed differences which were statistically significant.

This project raises some interesting points with respect to the relative influence of factors in the motivation of boys and girls. Briefly, the results indicate that a boy is more likely to react antagonistically to scolding and ridicule when used for motivation than is a girl; that challenging, interesting work is a strong motivation, though marks and examinations are also effective; that girls are more sensitive to the opinions of members of their group than are boys; and that the emphasis on thrift and future jobs has a stronger motivating effect than might be expected.

[1] Items inclosed in parentheses have the same rank.

THE EXPERIENCE METHOD IN BEGINNING READING: AN ANSWER

CLARENCE R. STONE
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In a recent number of the *Elementary School Journal* appeared an article by Charles A. Smith,[1] presenting data purporting to disprove a statement contained in my article[2] in an earlier issue to the effect that the current-experience method fails to give systematic repetition of a minimum basic vocabulary in beginning reading. Among the conclusions stated by Smith is the following:

> Evidence gathered from the first grades of a small city system indicates that, insofar as testable drill materials are concerned, the experience method actually provides as much repetition as does the drill method. Stenographic reports of reading situations show that, for the minimum basic word list, the first-grade child taught by the experience method is even more likely to receive drill or repetition of basic words than is the child taught by the traditional method. The former not only encounters at least as many words, but he is likely to be given more repetitions of the words.

What are the data from which this important and comprehensive conclusion is drawn? The table of data bearing on repetition of words is based on stenographic records obtained for *one* day, early in the third month of school, from the classrooms of six first-grade teachers. The six teachers were ranked on the basis of the extent to which the reading program was of the integrated activity-experience type. One recognizes at once, of course, the serious inadequacy of the data for substantiating the conclusion quoted above. Three other tables of data are given, but none of them bears on the matter of repetition of a basic beginning vocabulary in reading.

In my humble judgment, Smith's plan of investigation will not give the answer to the question of the efficiency of the incidental

[1] Charles A. Smith, "The Experience Method in Beginning Reading," *Elementary School Journal*, XXXVIII (October, 1937), 96–106.

[2] Clarence R. Stone, "The Current-Experience Method in Beginning Reading," *Elementary School Journal*, XXXVI (October, 1935), 105–9.

method, or the integrated activity-experience method, compared with the efficiency of a method involving the use of materials carefully organized to facilitate the orderly development of fundamental habits and attitudes in reading, including word recognition.

I hold no brief for traditional mechanical methods in beginning reading. Repetition of words in reading materials with a disregard for good sequence and interest, as was attained in the primers widely used thirty years ago, is very undesirable; but the repetition provided in preparatory intrinsic workbook exercises and in certain highly interesting preprimers and primers published within the last seven years is a great advantage to the child who is handicapped in learning to read because he does not readily learn and remember word forms.

Unfortunately, in schools of both the "activity" and the traditional type, there are too many children today who are failing to get a satisfactory start in reading and, as a result, are acquiring wrong habits, unfortunate attitudes, or both. The issue is not between the so-called "progressive" school and the traditional school. The problem is that of adapting the reading instruction to the needs of the children. The children who are slow in learning to read need materials and techniques quite different from those used with the pupils who easily learn to read. One of the important differences is the need on the part of the slow learners for more repetition of the basic beginning vocabulary in highly interesting reading materials. These children also need specific guidance in acquiring facility in word-form discrimination and other skills and habits essential to ready word recognition.

At the time this article was written, I had been working for three weeks with a third-grade, nine-year-old boy, having an intelligence quotient of 85, who was attending a school in which the experience method had been stressed. His score on the Stone-Webster Test in Beginning Reading, given a month earlier, was below the average of children at the end of low-first grade.[1] The test paper showed many

[1] Subsequent to the writing of this article and at the end of two months of instruction, another form of the same test was given, the results of which revealed progress of 0.7 of a year—a greater gain than the boy had made during three years in school with exposure to the experience method.

confusions of words similar in configuration. He was unable to read the simplest preprimer without making many errors on each page. He was unable to spell the simplest words and did not know some of the letters.

After three weeks of instruction with a preprimer workbook providing a maximum amount of repetition and techniques for insuring growth in word-form discrimination and with a simple but interesting primer and the accompanying preparatory workbook, he became practically independent in reading preprimers. In his latest lesson he read the whole of *Nip and Tuck*,[1] one of the newer preprimers, in twenty-five minutes and, except for the names of the characters and pets, had to be helped on only an occasional word. He had learned to spell about twenty two-letter words. He was permitted to typewrite on a machine with primer-size type the words which he learned to spell. At his next lesson he was to start with three-letter words.

This boy would never have learned to read under the current-experience method without expertly organized materials for overcoming his difficulties. Likewise, he would never have learned to read by the story method, the dominant method twenty years ago. He is learning to read by the newer intrinsic method, involving the use of material organized for the best combination of simplicity and interest. No non-intrinsic drill materials are being used.

Very inconsistently, some persons who advocate the "progressive," integrated, activity-experience method for all children recommend drill materials and techniques of the non-intrinsic type, which were characteristic of traditional methods in reading. The recently developed intrinsic method has, fortunately, eliminated the need for such nonprogressive types of instruction.

Table 4 in Smith's study purports to show the relative accomplishment of the six classes during a year. Curiously enough, one column gives averages with nonreaders eliminated. Now that raises an interesting question. In classes starting to read in September, should there be any nonreaders in June? I am bold enough to say that there need be none if methods and materials are properly

[1] Grace E. Storm, *Nip and Tuck*. Guidance in Reading Series. Chicago: Lyons & Carnahan, 1936. Pp. 46.

adapted to the varying requirements of the children. With the aid of available basic materials utilizing the intrinsic method, together with the co-ordinate use of additional beginning reading materials providing the best combination of simplicity and interest, the slow learners in reading (some of whom will be bright children) need not be nonreaders after a year in Grade I.

Smith's final conclusion is as follows: "The acquisition of meaningful facts justifies the experience method on the basis of factors other than drill. Nevertheless, word drill may be, and seemingly is, given as well or better under the current-experience method." The fact is that "word drill," in the proper meaning of that term, is inconsistent with what goes by the name "experience method" in reading. Evidently Smith's experiment shows no clear-cut comparison of the experience method and the systematic method. In fact, he gives no evidence that a really up-to-date systematic method was used by the teachers ranking lowest in experience-activity reading. His experiment really proves nothing.

The experience method, however, has important contributions to make in connection with beginning reading. Elsewhere[1] I have given an analysis of both the advantages and the disadvantages of the so-called "experience method." I am quite convinced that extended experimental studies of the right sort will some day show that the most effective plan, both from the standpoint of personality factors and reading skills and from the standpoint of interests, is the parallel use of integrated-activity reading and the use of the systematic, intrinsic method with adequate adaptations to individual needs.

[1] Clarence R. Stone, *Better Primary Reading*, pp. 190–203. St. Louis, Missouri: Webster Publishing Co., 1936.

THE POLICY OF PROLONGING THE LIFE OF TEXTBOOKS

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PRESSURE FOR ECONOMY

Until the beginning of the twentieth century the problem of furnishing textbooks was almost entirely the responsibility of the individual. More recently there has been general recognition of the advantages of free textbooks for school children, and the continued progress in the direction of extended provisions for free textbooks is a source of gratification to responsible school authorities. However, the free-textbook plan carries with it additional responsibilities on the part of the teaching and the administrative staffs of the school system and requires, also, constant attention to the matter of economy in the administration of the textbook supplies. The purpose of this article is to give consideration to certain measures which are frequently employed for the purpose of prolonging the life of textbooks in the interest of *financial* economy.

In American school systems a small allowance for textbook purchases from year to year has been regarded as sufficient for the needs of teachers and pupils. The report on the cost of textbooks in the Thirtieth Yearbook of the National Society for the Study of Education[1] shows that on the basis of pre-depression experience the cost of textbooks in thirteen states supplying free textbooks accounted for approximately 2 per cent of the annual budget for current expenses of public elementary and high schools. In the reports from 134 cities it was found that the cost of textbooks amounted to approximately 1.4 per cent of the current expenses of these school systems. Although fully conscious of the essential value of the textbook in the instructional program, school superintendents are, nevertheless, con-

[1] Nelson B. Henry, "The Cost of Textbooks," *The Textbook in American Education*, pp. 226–27. Thirtieth Yearbook of the National Society for the Study of Education, Part II. Bloomington, Illinois: Public School Publishing Co., 1931.

stantly engaged in devising possible economies in textbook procedure—in response, of course, to criticism and pressure from school-board members, parents, and taxpayers' organizations. These criticisms arise in part from the fact that wear and tear on textbooks is conspicuously observable both at school and in the homes of the pupils and in part from the fact that the existence of any seeming surplus of textbook supplies is usually regarded as evidence of wasteful management.

Pressure for economy in the provisions for textbooks leads to the adoption of procedures which may be expected to extend the period of service of each textbook in use in the schools. Teachers and principals formulate and enforce regulations for the handling of books in the possession of the pupils and for the rehabilitation of books which are worn or which have broken backs or dirty or mutilated pages. It is not uncommon for school authorities to enforce penalties upon pupils when books in their hands are observed to be in damaged condition. The most significant measures of economy, so far as prolonging the life of textbooks is concerned, are the mending and the rebinding of damaged books and the use of book covers to strengthen and protect the backs of the books.

PRACTICE OF REBINDING BOOKS

Rebinding books is especially common in urban communities, where the number of books used in the school system is large enough to provide from time to time a collection of battered and mutilated textbooks which are fit subjects for the bindery. This practice has been growing during the past twenty or twenty-five years and may be attributed to three principal considerations.

First, there is a real economy in substituting a rebound book for a newly purchased book whenever the former can be provided at a lower cost than the cost of the new book. In reply to an inquiry sent out for the purposes of the present report, the director of books and supplies of the St. Louis school system declares that the average annual saving by means of rebinding old books is about ten thousand dollars. The number of books rebound annually is given as approximately twenty-six thousand. A like report from the Detroit school system indicates that about sixty thousand books are rebound annually, but this number includes both free textbooks and free library

books, there being about an equal number of these two classes of books.

It is probably true, also, that the rebound book has even a longer life than the new book, an additional economy thus resulting.

The rebinding of textbooks for school use has probably been stimulated also by the reported experiences of those in charge of public libraries throughout the country. These librarians usually declare that rebound books circulate from three to four times as long as new books. A member of the library staff at the University of Chicago was questioned on this point and gave it as his opinion that this rule would apply to a significant percentage of the volumes acquired by the divisional library over which he presides.

Second, the practice of rebinding textbooks on a large scale has unquestionably been somewhat motivated by the ease with which administrators can prove that some saving has been effected and some waste eliminated. In the *Chicago Schools Journal*,[1] for example, appears a two-cut illustration designed to show the extraordinary possibilities of frugality in the rebinding process. On the left is a striking picture of damaged books covering an extensive section of the warehouse floor and piled almost ceiling-high. Much the appearance of a rubbish heap is presented, and the illustration carries the legend "200 Tons of Books Discarded." On the opposite page is a picture of another section of the warehouse with long rows of well-bound, neatly packed textbooks, carefully arranged for effective photographing, which is labeled "Rehabilitated." Any heavily burdened taxpayer would regard this clever photographic demonstration as evidence enough that practically all the money expended on the Chicago school system under the present regime is carefully directed to the most productive channels.

Third, rebinding textbooks has been stimulated in marked degree during the past two or three years as a result of the co-operative projects carried on by school systems and the Federal Emergency Relief Administration.

USING BOOK COVERS

The use of book covers to prolong the serviceable life of textbooks, while not universally practiced in schools supplying free textbooks,

[1] Don C. Rogers, "Textbook Administration in the Chicago Public Schools," *Chicago Schools Journal*, XVIII (November–December, 1936), 52–53.

is still observable in many quarters. Indeed, the practice is sometimes urged as an essential type of training of school pupils. An editorial in the *School Executives Magazine*,[1] for example, reports the recommendation of a supervisor in a large city school system that each pupil should be required to cover his books with oilcloth, wrapping paper, or manufactured covers. He objects to the use of newspapers for this purpose because newspaper covers carry "no real appreciation of the spirit of book-covering" (whatever that "spirit" may be).

The attitude of many school people toward the use of book covers is summarized in most interesting fashion in a brief article from which the following quotation is taken.

> I visited a modern school in one of our best communities recently. The building was clean and attractive, and the children were neat and well groomed. A health lesson was in progress in one of the rooms. In the dental clinic, the hygienist was giving a lesson on the brushing of teeth. On the bulletin board in the corridor there was a chart showing the record of the various classes in cleanliness. But as I passed from room to room I noted a condition which was utterly at variance with the health-and-cleanliness program of that school. The textbooks used by these children were black with grime; some were falling apart; many were without backs. . . . .
>
> The cover of a book is the part which is constantly exposed. It is the surface which comes in contact with the desk, the pupils' hands, and other germ-distributing agencies. After a few months of use it is not only unfit to handle but there is a tendency for the user to exercise less care in keeping it clean. The pupil who begins the term with a clean, new cover has an incentive for keeping it in that condition.
>
> As an economy measure alone, the book cover justifies its cost. Those who have used the better quality of book cover know that it is a genuine protection to the life of a book. In addition to removing the strain from the board covers, it is in reality a case in which the book is carried and, as such, it very often prevents damage not only to the board cover but to the contents. . . . .
>
> If properly used, book covers are not an expense, but an economy measure. They promote personal and school hygiene, and they contribute to a program of aesthetic development. There is a technique in their use which removes the imaginary difficulties of those who have not used them properly.[2]

[1] "Care of Textbooks," *School Executives Magazine*, L (April, 1931), 393.

[2] Clyde C. Green, "The Philosophy of the Book Cover; A Schoolman's Viewpoint," *American School Board Journal*, XC (April, 1935), 18.

ADVISABILITY OF PROLONGING LIFE OF SCHOOLBOOKS BY ECONOMY MEASURES

The rebinding of textbooks and the use of book covers have the obvious effect of keeping the books in the hands of pupils for a longer period of time than the period during which the books would be acceptable for use if these measures of economy were not employed. The reports to which references have been made in this article indicate clearly that thousands of textbooks are continued in use for periods of six, eight, or ten years. It has been noted that the amount of money involved in providing textbooks for free use of pupils in the schools constitutes a relatively small item in the annual school budget. It may seriously be questioned whether the economy achieved through rebinding and the use of book covers can be justified and whether this particular policy of economy should be recognized by school authorities as valid and proper. Much has been written during the depression in criticism of the skimping policy which many school systems have adopted in relation to textbook materials. Descriptive accounts of the condition of books in the hands of pupils in well-ordered school systems convey the impression not only that the books are unsightly but that they are filthy and probably a menace to the health of the children using them. There is, of course, no serviceable rule as to the number of years that a textbook can be used by school pupils before it is unfit for further service. There are many reports, however, which furnish evidence that it is common practice in public-school systems to keep the books in the hands of pupils as long as the books will hang together and then, in spite of the accumulation of dirt and smears, to rehabilitate them for further use. When one reads such comments as those presented in a pamphlet entitled *Dirty, Worn-out, Out-moded Schoolbooks*, distributed by the Macmillan Company a few years ago (to mention only one of the numerous efforts made to stimulate an interest in the improvement of the textbook situation), one feels that administrative officers and teachers in the schools should be roused to vigorous protest against the practice of such rigid economy in textbook management.

One further point may properly be raised in this connection. For a number of years the tendency has been for textbook publishers to

provide elaborate and expensive pictorial materials in a large proportion of the textbooks provided for pupils of elementary-school and high-school grades. In addition, there is an obvious effort on the part of publishers to make textbooks attractive by means of covers which are colorful and artistic in design. Presumably these embellishments are for the purpose of making textbooks contribute to the development of aesthetic appreciations and perhaps giving the pupils respect for the materials which guide their learning experiences. It is probably true, however, that this trend toward artistry in the making of textbooks is stimulated more by the competitive requirements of the trade than by the demand for highly artistic textbooks as a medium of instruction. It may well be that the attractive book cover is provided for the benefit of the superintendent or the teacher who selects the book for use in the schools rather than for the benefit of the pupil who uses the book. Whatever may be the explanation of this tendency in textbook-making, it seems obvious that the educational value of the artistic features of present-day textbooks is largely sacrificed by the economy measures employed to keep the books in service long after these features have lost their original aesthetic qualities.

A REMEDY PROPOSED

The problem of the propriety of the economy policies here mentioned and of the practice of using books longer than they can really serve the purposes for which they are prepared is certainly a problem for the school man rather than for the publishers. So long as schools demand books of the kind which are now being furnished by publishing companies, books of this type will evidently be forthcoming. This article is a plea for a reconsideration on the part of the school man of the policies followed in selecting and using textbooks. From time to time the suggestion is heard that instructional materials could be provided at less cost and in a form better adapted to present-day instructional procedures if schools were willing to accept materials published in pamphlet form and without the embellishments which the competitive nature of the textbook trade has developed. The purpose of this article has been served by bringing to the attention of school administrators the fact that their

failure to adjust their textbook policies to changing conditions in the schools and their inclination to yield to the pressure for economy in schoolbook management are probably subject to the criticism that these policies deprive the pupil of the kind and the amount of instructional materials which could otherwise be provided and which would contribute more effectively to his progress in school. William John Cooper, formerly United States Commissioner of Education, is reported to have made the following comments on the attitude of school people with respect to textbooks.

> Public vanity in the United States is the greatest obstacle to the introduction of paper-bound books and cheap books generally. . . . .
>
> The American people have shown a distaste for paper-bound books, and in so doing have encouraged a more costly type of publication. . . . . When they have been taught that this is vanity and that a considerable part of the expense attached to the book is in its binding, then there is some hope for cheaper books in the country. . . . . Persons who put half of the price of a book in the binding, generally speaking, will buy half the number of books that others will buy who are not greatly concerned about the binding.
>
> Dr. Cooper said that he personally indorsed the movement for cheaper books and wanted to see more paper-bound books in the United States. He called attention to the large number of cheap paper-bound books found in Europe compared with the scanty number in the United States.[1]

SUMMARY

1. In the last two decades parents and taxpayers' organizations have increasingly demanded that steps be taken to prolong the life of textbooks, in spite of the fact that the cost of textbooks amounts to less than 2 per cent of the school budgets for current expenses.

2. The value of these efforts to prolong the life of textbooks is being seriously questioned by school men and publishers because this policy leads to (*a*) unhygienic conditions, (*b*) a scarcity of supplementary material, and (*c*) the use of outmoded books.

3. A proposed remedy is to insist on books with cheaper bindings and less expensive illustrations and thus to make possible the purchase of greatly enriched material.

[1] "Vanity Is Called Greatest Obstacle to Paper-bound Books," *Nation's Schools*, VI (August, 1930), 69.

THE EFFECTIVENESS OF CHECKING SUBTRACTION BY ADDITION

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EDUCATIONAL LITERATURE ADVISES CHECKING

It is certain that an adult uses checking as a means of obtaining accuracy in computation. By analogous reasoning it is frequently concluded that school children will obtain accuracy by checking. There is a striking difference, however, between the number usage of an adult and that of the pupil. An adult makes a computation because a real and vital problem has been encountered; most adults do not compute except under such circumstances. The pupil's use of number is not confined to such a meaningful experience, especially in a drill program, and checking therefore may or may not be a vital factor in producing accuracy in computation.

Educational literature on the teaching of arithmetic gives numerous suggestions about the use and value of checking. Two brief quotations which are representative are as follows: "No computation should be considered finished until checked."[1] "Children should be taught to check all of their results as it is a very important factor in securing accuracy."[2] Many references could be cited in which checking is highly recommended, but there is a dearth of experimental evidence to justify these statements.

The writer has been unable to find any published reports showing the effect of checking on accuracy in subtraction. Clark and Vincent experimented with pupils in Grades V and VI to determine the effect of checking in single-column addition. The results from their study seem to be favorable to the use of checking for producing accuracy. Parts of the conclusion of their study are as follows:

[1] John C. Stone, *How To Teach Primary Number*, p. 152. Chicago: Benj. H. Sanborn & Co., 1922.

[2] Margaret E. Sweeney, "One Hundred Per Cent in the Fundamentals," *Educational Method*, XVI (January, 1937), 174.

Although the checking group has less speed, it has greater accuracy than the non-checking group. . . . .

In a random sampling of over 2,000 column additions the non-checking group was found to have an accuracy of 77.9 per cent. In a sampling which represented the same working time the checking group had added less than half as many columns, but with an accuracy of 90.1 per cent.[1]

These investigators conclude that their results are very difficult to interpret, but their findings seem to indicate that checking produced greater accuracy.

The writer has shown elsewhere that checking division by multiplication does not assure accuracy when the divisor is either a one-figure number[2] or a two-figure number.[3] In the investigation reported in this article he undertook an experimental study to find the value of checking subtraction by adding the remainder to the subtrahend. In a survey of methods of checking used by adults, Upton[4] found that in 80 per cent of the cases the addition check was used for checking subtraction.

PROCEDURE OF INVESTIGATION

During the first part of February, 1937, the writer secured the co-operation of seven third-grade teachers in two nearby school centers. From an enrolment of 214 pupils, final test results were secured for 174 pupils. These pupils knew the subtraction facts at the beginning of this investigation, but most of them did not know how to subtract an example in which one of the figures of the minuend was smaller than the corresponding figure of the subtrahend.

For a period of about twelve weeks practice exercises in subtraction were supplied to each pupil. No computation work in subtrac-

[1] John R. Clark and E. Leona Vincent, "A Study of the Effect of Checking upon Accuracy in Addition," *Mathematics Teacher*, XIX (February, 1926), 68, 71.

[2] Foster E. Grossnickle, "To Check or Not To Check?" *Elementary School Journal*, XXXVI (September, 1935), 35–39.

[3] Foster E. Grossnickle, "Appraising the Program for Teaching Division," *Appraising the Elementary-School Program*, pp. 361–68. Sixteenth Yearbook of the Department of Elementary School Principals. Bulletin of the Department of Elementary School Principals, Vol. XVI, No. 6. Washington: Department of Elementary School Principals of the National Education Association, 1937.

[4] Clifford B. Upton, *Studies in the Teaching of Arithmetic*, p. 26. New York: Teachers College, Columbia University, 1927.

tion was given except that provided in the exercises. The examples represented any combination of one-, two-, or three-figure numbers. Each example had to be checked by adding the remainder to the subtrahend. The form used on the practice sheet is shown in the sample at the left. The subtrahend for each example was written under the word "Check." The pupil solved the example and then wrote the remainder in the check column. In the illustration, 267 would be written under 456, and the sum (723) indicates that the solution is correct. As checking is usually taught for subtraction, the example is not rewritten. In this investigation it was necessary for group experimentation that the check numbers be rewritten if the investigator was to be certain that an example had been checked.

723	Check
456	456

Each week the papers were scored by the writer and were returned to the pupils. If an error occurred either in the example or in the check, the error was corrected by the pupil before the paper was filed by the writer.

A record was kept for each pupil of the errors made in checking. The results soon showed that checking was about as ineffective in producing accuracy in subtraction as it was in maintaining accuracy in division. Some of the teachers reported that many of the pupils would solve the example, write the remainder under the check number, and then look to the minuend to find the sum. The types of errors found in the examples and in the checking of 214 pupils are given in Table 1.

The error which had the greatest frequency was described as "Forced the check." In an error of this kind some of the difficulty may have resulted from faulty knowledge of the basic combinations. An effort was made to catalogue under this classification only the outstanding cases of forcing the check.

Table 1 shows that, of a total of 13,395 errors, there were only 26 noticeable cases in which the remainder was changed because the sum of the numbers involved in the check did not equal the minuend. This small percentage of the total number of cases is indicative of the ineffectiveness of checking as a means of improving or maintaining accuracy in subtraction.

At the end of about twelve weeks a test in subtraction was given.

This test included the use of the one hundred subtraction facts in examples in which the minuend contained either two or three figures. The test was administered twice, an interval of one week intervening. At the first testing each example was checked, and in the second

TABLE 1

ERRORS MADE IN SUBTRACTION EXAMPLES AND IN CHECKING THE RESULTS

Error	Frequency of Error
1. Forced the check	2,644
2. Failed to carry in subtraction and in check*	2,423
3. Wrong combination in example and in check	2,403
4. Failed to carry in check	1,446
5. Check and result not the same	1,224
6. Subtracted from top down	535
7. Subtracted correctly, checked incorrectly	387
8. Did not complete check	371
9. Used subtraction in check instead of addition	310
10. Subtracted incorrectly, checked correctly	307
11. Added example instead of subtracted	306
12. Carried when not necessary in subtraction	254
13. Added a number other than remainder in check	158
14. Subtracted incorrectly, checked incorrectly	157
15. Carried when not necessary in check	156
16. Added minuend in check	145
17. Omitted check	97
18. Check changed to equal minuend	46
19. Example changed to equal check	26
Total	13,395

* Either the equal-additions or the additive method was used by the pupils in this investigation.

test no checking was used. The time required for each test was recorded. The same test was given in eight other grades to approximately a hundred pupils in each grade. Grades XIII and XIV are at the college level. A record of the time for the completion of the test was not made in these eight grades. The results from the tests are shown in Table 2. "Error" as used in this investigation means an incorrect digit in the result. If the result to an example should be 438 and the result given is 328, there are two errors in the example.

The column on the right in Table 2 shows whether there is a

significant difference between the two groups. When the difference between the means for the two groups is at least four times its probable error, there is a significant difference between the means. There is only a chance difference between the mean scores for each grade except Grade IX. In this grade there is a significant difference in accuracy in favor of checking. However, in Grade V the chances are about fifty to one that the results will be more accurate when

TABLE 2

MEAN NUMBER OF ERRORS ON SUBTRACTION TEST WITH AND WITHOUT CHECKING OF EACH EXAMPLE AND RATIO OF DIFFERENCE OF MEAN TO PROBABLE ERROR OF DIFFERENCE

Grade	Number of Cases	Mean Number of Errors		Difference of Means in Favor of Checking	Ratio of Difference to Its Probable Error
		With Checking	Without Checking		
III	174	4.54±0.380	5.56±0.310	1.02	2.08
IV	106	1.70±0.136	2.08±0.174	0.38	1.72
V	117	4.16±0.461	2.56±0.216	−1.60	3.14
VI	117	1.69±0.155	2.40±0.197	0.71	2.83
VII	112	2.89±0.298	2.91±0.272	0.02	0.05
VIII	116	1.30±0.078	1.44±0.096	0.14	1.13
IX	86	1.44±0.079	2.37±0.138	0.93	5.85
XIII	91	1.41±0.113	1.34±0.086	−0.07	0.49
XIV	91	1.26±0.115	0.96±0.067	−0.30	2.25

they are not checked than when they are checked. Since some of the chance differences are favorable to checking and others to no checking, the results are conclusive that checking subtraction examples in practice exercises by the addition method does not result in greater accuracy than will be achieved if checking is not used.

A record was kept of the amount of time required for completing the test in Grade III. The average time with checking was 26.31 ± 0.699 minutes; the average time without checking was 13.95 ± 0.470 minutes. These results show that the average time required for checking was almost as much as the average time required for solving the examples. Since checking does not appreciably increase the accuracy of computation, it is a waste of time to check all examples in subtraction by the addition process.

SUMMARY AND CONCLUSION

Seven groups of third-grade pupils were taught compound subtraction for a period of about twelve weeks. Each practice example was checked by addition. At the close of the study a test was given to these groups as well as to about a hundred pupils in each of eight other grades. The results of this study show (1) that the pupils frequently forced the check and that in many cases the checking was perfunctory, (2) that there was only a chance difference between the mean accuracy of the group of pupils when they checked the final test and their mean accuracy when they did not check, (3) that the average time required for checking was almost as much as the average time needed for subtraction.

The results of this investigation indicate that teaching checking at the time of learning the subtraction algorism is not beneficial in producing greater accuracy than could be obtained if checking were not used. Therefore the checking process should not be taught simultaneously with the algorism. Checking should be taught when the pupil understands the significance and the value of a check. The data in this investigation show that for abstract examples checking is of doubtful value. Teach the pupil, therefore, the purpose of a check and how to use a particular check so that he can apply it when a real and vital problem is confronted. Otherwise, checking is certain to be superficial and a mere appendage to a given algorism.

READING PROGRESS IN KINDERGARTEN AND PRIMARY GRADES[1]

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For the past four years a co-operative study of reading readiness and progress has been under way in the Horace Mann School, to which the teachers and children of the four-year-old and five-year-old kindergartens and Grades I, II, and III have contributed.

The program of instruction in this school stresses a functional teaching of reading as a part of a rich, broad, total experience. Some results from the investigation of beginning reading suggest certain adaptations in teaching by which able and thoughtfully progressive teachers can provide for more effective and economical learning of the mechanics of reading without violating in any way the basic emphasis on a varied and rich experience for young children or without violating the ideal of individualized learning.

The study of reading readiness and reading progress was begun in Grade I of the Horace Mann School in the autumn of 1933. Three readiness tests—Hildreth, Griffiths, and Orleans' Metropolitan Readiness Tests for Kindergarten and Grade I; the Van Wagenen Reading Readiness Tests; and the Stone and Grover Classification Test for Beginners in Reading—were given to all the children. The Metropolitan test was given to groups of six or seven pupils at a time; the other two were given individually. In December additional assistance was secured, and several subtests of the Gates Reading Diagnosis Tests were given individually. In January work-

[1] Prepared with the assistance of the United States Works Progress Administration, New York City, Project No. 65-97-295, Subproject 25.

ers from the Civil Works Service were assigned to the project to assist in the clerical work, and several other measures of the children were made, including the Gates Primary Reading Tests and the Hildreth First Grade Reading Analysis Test. A long questionnaire was returned by the parents of every child. School and preschool records were searched for data that might contribute to an understanding of individual readiness for, and progress in, reading. Altogether, 106 usable measures and appraisals were obtained, covering scholastic, physical, psychological, and social aspects of the children's development.

These data were treated by the simple correlation technique, the rank-order method being used for most of the computations and the Pearson product-moment method for the remainder. More than two thousand correlations were obtained. Several of the tests used were analyzed statistically in other ways, for example, by tabulating items that seemed of special interest. A case study of each child was also made.

Study of the results has led to three conclusions with regard to these pupils:

1. Reading readiness is in reality reading progress: in particular, progress in the initial stages of learning to read. Just as in all progress in reading, so in its beginning there are seen the two aspects: skill, or mechanics, and interest.

2. No inherent qualitative differences among these children explain differences in their progress in reading. Varying abilities to see, hear, and speak and varying mental ability or personality traits do not seem to be closely or critically related to progress in reading, as revealed by either the statistical analyses or the case studies

3. Differences in reading progress can be explained mainly in terms of learning. In the learning experiences of these children one set of factors seemed to stand out as of pre-eminent effectiveness in contributing to reading progress, namely, mastery of letter symbols, both form and sound. This result was indicated by statistical analyses, case studies, test analyses, and notes and observations made during the testing of the children.

Because of the striking way in which the third conclusion ap-

peared in the results of the first year of study, the investigation was continued during the two succeeding years. Four other first-grade groups were studied in order to verify the results found with the original group. The study was extended also to four second- and two third-grade groups and to two five-year-old and two four-year-old kindergarten groups, for the purpose of determining whether any trends might be found among older and younger children. Eighteen of the twenty-five first-grade pupils originally studied continued in the Horace Mann School and were followed as a separate group through Grades II and III. No particular differences were found between these eighteen children as a group and the other groups.

The extended study has culminated in the correlating of results of individual testing with (1) abilities with letter symbols; (2) standard measures of Stanford-Binet mental age and intelligence quotient, weight and height, and other psychological and physical tests given to certain of the groups; and (3) measures of reading ability obtained (*a*) by individual tests of kindergarten and first-grade pupils in word recognition (Gates Primary Reading Tests, Type 1) and tests of second- and third-grade children in oral reading and word recognition (Gates Reading Diagnosis Tests); (*b*) by group tests in Grades II and III with the three types of the Gates Primary Reading Tests, the New Stanford Achievement Test, and the Progressive Achievement Tests; and (*c*) by the teachers' judgments of their pupils' ability to read. Observations and notes were also recorded during these two years, and stenographic records of class activities were made for three first-grade groups during the third year (1935–36) of the investigation.

The results of the second and the third years' work substantiated the conclusions reached the first year, namely, that the relations between abilities with letter forms and sounds on the one hand and reading ability, in terms of word, sentence, and paragraph reading, on the other hand are remarkably close for children learning to read in the Horace Mann School.

A further conclusion seems evident from the complete study, namely, that ability with the letter symbols is, to a large degree, a causal factor in ability to read words and sentences. The evidence for this conclusion appears from the following data:

1. Many of the children in the four kindergarten groups and also in the first-grade groups knew many letters before they knew words. The careful individual tests indicated that these pupils were conscious of, and interestedly concerned about, letter forms. Many parents reported that, when their children were much less than five or six years of age, they asked repeatedly for the names of letters—many before they asked about words.

2. The kindergarten and first-grade children who knew the most letter forms and sounds tended very definitely to be among the first to learn to read and to be the best readers.

3. Conversely, the children who were ignorant of, or much confused about, letter forms and sounds, tended very definitely to be the poor readers.

4. In trying to name and use words in the reading tests, kindergarten and all other children tended constantly and generally to use letters as clues to the words, as evidenced by their sounding of initial or other letters, spelling out words, and pointing to letters and by their telling the examiner without any solicitation that they knew certain words because these began with certain letters or sometimes because they ended with certain letters.

5. Errors in reading words and sentences in many instances were explainable because of errors as to letters that made up the words. For example, in a visual-perception word test (Gates Reading Diagnosis Tests, VIII, 2) children tended markedly to designate the incorrect word that began with the same letter as the correct word although there were four other incorrect words to choose from. In this same test it was noted over and over again that children in kindergarten and Grade I spelled out audibly or by lip-movement all or parts of the words as they looked along the lines for them.

Case studies of nonreaders in middle and upper grades reported in other investigations commonly show a state of ignorance or confusion, or both, as to letter forms and sounds.

The conclusions of the study emphasize the value of an investigation of the ways in which the teachers of these pupils teach reading. In a broad sense, they treat reading as a part of the normal growth of children, which they endeavor to guide in part by providing rich and vital child-life experiences. In such guidance felt needs and

worth-while interests of the children are recognized to be fundamental motives stimulating children's activities. In particular reference to the acquisition of reading skill, guidance of children in the Horace Mann School is characterized by what may be called informal "functional" learning. Children feel a need for reading, and aid which helps them to read at such moments is given. Labels, names on lockers or wherever useful, notices on blackboards or bulletin boards, friendly letters, stories, directions, and the like are such functional uses of reading. Letter names and sounds, specifically, are taught in this functional way. For example, attention is drawn to beginning letter forms and sounds when such attention is believed to promise aid or economy in reading. The individual form of a given word, the name "Mathilde," for example, may be observed in contrast with another, "Margaret." In most rooms there is little or no formal isolated drill on letters or phonic combinations.

In the group of children first studied, the teacher made particular use of this informal functional sort of learning of the basic symbols of letter forms and sounds. During the second year of the study she remained with the same group of children when they became a second grade. Four of the original first-grade group did not return to school that year, and nine other children joined it. Some of the correlations between letter and reading abilities for the two years that she taught these groups are shown in Table 1.

In other studies in which pupils have been given formal drill on learning names and sounds of letters and combinations of letters, little or no relation has been found between excellence in such formal drills and progress in reading. That sort of formal work is not only foreign to the growth and the development of abilities through vital child experiences but seems quite barren of results in learning the mechanics of reading.

The important part that knowledge of letter forms and sounds played in the progress in learning to read made by Horace Mann kindergarten children is indicated by the correlations between certain scores on the Gates Primary Reading Tests for a group of fifty-four five-year-old children. The Pearson formula was used for the coefficients, and the effects of Stanford-Binet mental age and intelligence quotient were eliminated by means of partial correlation. The

correlations were: between word recognition in the autumn and recognition of small letters in the autumn, .61 with mental age constant and .69 with intelligence quotient constant; between word recognition in the spring and recognition of small letters in the spring, .74 with mental age constant and .76 with intelligence quotient constant; between word recognition in the spring and the writing of small letters in the spring, .71 with mental age constant and .69 with intelligence quotient constant.

TABLE 1

CORRELATIONS BETWEEN LETTER ABILITIES AND MEASURES OF READING ABILITY FOR PUPILS MEASURED IN GRADE I AND AGAIN IN GRADE II

Measure of Letter Abilities (October, Grade I)	Correlation in Grade I with—		Correlation in Grade II with—
	Teacher's Prediction of Success (Autumn)	Gates Primary Reading Tests (Spring)	Stanford Achievement Test (Spring)
Gates Reading Diagnosis Tests:			
IX, 1 and 7, Giving phonic combinations	.70	.75	.89
IX, 9, Giving letter sounds	.67	.70	.60
IX, 11, Recognizing small letters	.66	.79	.74
XIII, 1 and 2, Writing words	.75	.78	.74

In this kindergarten group, also, the functional learning of letter forms and sound was provided for. In fact, little or no other guidance in the mechanics of reading was given. No formal drill was used, and no effort was made to arouse interest in reading except as the children's vital experiences led them to try to read.

That some of them were "ready" to learn letters, however, was illustrated in an eight weeks' experiment with four of the kindergarten children. A teacher worked intensively with these four children for about twenty minutes two or three times a week, using the functional approach and guiding the interests of the children to the learning and the use of letters. Such things were done as making and sending a birthday card, writing a brief story about a marionette called Black Sambo that they played with, and writing their own

names on a typewriter. One of the four children was not interested in the reading and writing part of these activities, and no special effort was made to arouse her interest. The other three, however, were enthusiastic workers, and their progress in learning letters is reflected in Table 2.

TABLE 2

PROGRESS MADE IN LEARNING LETTERS BY FOUR KINDERGARTEN CHILDREN GIVEN EIGHT WEEKS OF INTENSIVE INSTRUCTION

	Pupil 1	Pupil 2	Pupil 3	Pupil 4	Average
Number of small and capital letters recognized:					
November	48	6	36	6	24.0
April	49	28	40	0	29.3
May	52	41	52	3	37.0
Gain, November to April	1	22	4	−6	5.3
Gain, April to May	3	13	12	3	7.7
Number of small and capital letters written:					
November	22	3	12	0	9.3
April	33	18	24	0	18.8
May	44	33	47	3	31.8
Gain, November to April	11	15	12	0	9.5
Gain, April to May	11	15	23	3	13.0
Number of letter sounds given:					
April	0	0	0	0	0.0
May	8	5	9	0	5.5
Gain	8	5	9	0	5.5

Further evidence that kindergarten children were ready for, and interested in, letters and reading was found in the keen interest that nearly every child took and maintained in the individual letter and reading tests. This lively and serious desire to learn letters and words on the part of these children, who were under no formal compulsion to learn to read, was one of the most convincing arguments that the form and the sounds of the basic symbols of reading have a vital place in beginning reading.

It seems probable that most teachers far underestimate the long and difficult processes involved in mastering letter forms and sounds. In testing the children in this study, the examiners were impressed

with the intense effort put forth by most of the children in trying to name or to write letters. The efforts were often painful to observe: sustained frowning, alternate squirming and rigidity of body, pointing tensely, labored breathing, grunting, whispering, and even weeping. There are more than fifty-two printed letter forms and more than fifty-two script letter forms. These are complicated by varieties of type and by variations in written style more or less individual with every writer. It seems irrational to suppose that children can learn these many forms easily and painlessly. Still more irrational seems the theory that these confusing, and to the young child well-nigh numberless, forms should be learned without bringing attention directly to them. Such a theory, however, lies behind some current methods of teaching reading. The child must read sentences first, it is maintained, then break these up into phrases and then into words; but the idea unit must not be violated by any perception of letter elements. "Hat" will be "hat" and not "hot," "bed" will be "bed" and not "bad," by context, not because the child sees letter differences in the words. It would seem as if teachers who follow such a theory conspire against pupils in their efforts to learn; these teachers appear to be determinedly on guard never to mention a letter by name, to give a letter sound, or to show how to use either letter forms or sounds in reading. Further, such teachers confound confusion by directing attention from the beginning to complicated patterns of forms and sounds which are forever changing their combinations in words, phrases, and sentences. Such a method may produce results (as almost any consistently used method will), but the reason may be mainly that the children attend to and learn the letters in spite of the teachers and the method.

SCORING OF SUBJECTIVE TESTS WITH SEVERAL VARIABLES CONTROLLED

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THE PROBLEM

The study here reported is concerned with the ability of teachers to form reliable estimates of scores on subjective tests when the variables of background, environment, training, nationality, and cultural interests of the teachers are largely controlled. Specifically, the investigator attempted to determine whether, under such conditions, teachers could approximate a uniform judgment of the value of the responses of elementary-school pupils in the common essay topics of reading, language, geography, history, and health.

PREVIOUS RELATED STUDIES

Previous studies in the field have shown that low reliability may be expected in the subjective scoring of school papers. Beginning with the investigation by Starch and Elliott,[1] several studies have made comprehensive inquiry into the relative degrees of error to be expected in teachers' ratings when judgment is required in evaluating pupils' answers. Starch and Elliott sent to 180 high schools exact reproductions of a geometry test paper written by a Wisconsin high-school pupil. The reproduced copies were to be marked by the principal teacher of mathematics in each of the schools. One hundred and twenty-eight replies were received and tabulated. The range of assigned marks was from 28 to over 90 per cent. Twenty marks were 80 or above, while sixty-nine were below passing.

Ben D. Wood reported a study of the marking of papers of college students.[2] A group of expert readers assigned marks to history pa-

[1] Daniel Starch and Edward C. Elliott, "Reliability of Grading Work in Mathematics," *School Review*, XXI (April, 1913), 254–59.

[2] "The Measurement of College Work: Report of an Experiment Conducted by the Staff of Instructors in Contemporary Civilization in Columbia College," *Educational Administration and Supervision*, VII (September, 1921), 301–34.

pers. One of the experts wrote out a model answer to each question for his own use and convenience. By mistake the model paper was included among the students' papers and, according to the established procedure, was scored by several of the other expert readers. The marks given to it ranged from 40 to 90.

Other studies have been made more recently. The results seem uniformly to indicate the inability of teachers to mark papers subjectively with any significant degree of reliability.

METHOD OF PRESENT INVESTIGATION

To forty-one elementary-school teachers were submitted mimeographed copies of pupil responses to questions in reading, language, geography, health, and history. The unique facts of this study consist in the noteworthy similarity of background, environment, cultural influences, educational preparation, and teaching experience of the teachers. The mimeographed copies were distributed with the explanation that the papers were to be scored as carefully as possible in exactly the way they would be scored if they were final examination papers written at the end of the grades indicated.

The forty-one teachers were members of a college-extension class taught at Waterloo, Illinois. Since no purpose for the task of scoring the papers was stated, it is probable that the teachers assumed that their judgment in scoring would in some way affect their own marks in the course. It is therefore supposed that they made every conscientious effort to score all papers fairly and well.

TEACHERS WHO SCORED PAPERS

Similarity of background and environment.—All forty-one teachers had been born in the state of Illinois. It is of particular interest to note that thirty-eight had been born in Monroe County. All were teaching at the time of the investigation within eighteen miles of Waterloo, Monroe County, Illinois. Waterloo is known throughout the southern part of the state as the center of a thriving agricultural area, the inhabitants of which are largely of German descent. Among the forty-one teachers, thirty-five stated that Germans were predominant in their ancestry. Twenty-nine stated that they spoke the German language or were capable of using it. While the ages of

the teachers ranged from 23 to 55, the interquartile range was only from 29.6 years to 37.7 years, with a median at 32.7 years.

Similarity of educational preparation.—Asked in a questionnaire to explain where their higher education, including high-school training, had been secured, the teachers gave replies which showed a striking uniformity of educational experience. One failed to answer this question, but all the other forty had received their pre-college education in Illinois. Only four had received any college training outside the state. Practically all had graduated from the same high school, namely, the high school in Waterloo. With no exceptions, these teachers had been born and educated in the same county, save for their college education. From the very beginning of their education, thirty-four had attended the public schools exclusively; and, of the remaining seven, six stated that only a little of their attendance had been in private schools. These few had attended private colleges for a few weeks after high-school graduation.

A marked similarity of educational training is seen in the fact that all but one of the teachers had finished high school, thirty-seven had begun college, but only thirteen had completed the first college year. None had completed more than three years. Of the thirty-seven who had attended college, twenty-two had attended the same teachers' college.

Similarity of teaching experience.—It would be difficult to imagine where a group of teachers more uniform in their teaching experience could be found. It has already been stated that thirty-eight of the group had been born in Monroe County, Illinois. At the time of the investigation all but one were teaching in Monroe County, and all but two were teaching in the elementary grades. Only five had ever taught outside the county. With a total of 611 years of teaching experience in the entire group, 588 of these years had been in Monroe County. The median number of years of teaching experience was 11.75 years; the median number of years of experience in Monroe County was 11.33. The average number of years of total experience was 14.9. While the range of total teaching experience was from 1 to 35 years, the interquartile range was from 9.75 to 16.88 years.

As a means of determining whether the teachers had the same general experience in the teaching of the elementary subjects, they

were asked to state whether they had taught in each of the grades in which the papers to be examined had been written. Thirty-nine of the forty-one teachers had taught in all the eight grades. One of the remaining two had taught in all but Grade VIII, and the other had taught in the first four grades only.

As a means of determining whether the teachers had the same subject-matter experience in teaching, they were asked whether they had taught all the five subjects from which the examination questions had been selected. With no exceptions, all the teachers had taught all the subjects.

NATURE OF THE MATERIALS EXAMINED

The five fields of study from which the examination questions were taken were reading, language, geography, health, and history. The grades represented were Grades I–VIII, inclusive, except Grade II. A total of nine questions was used.

Teachers were warned to take note of the grade levels of the pupils whose answers were to be scored. An answer adjudged to be perfect was to receive a score of 100 per cent. Each question was to be marked separately without regard to the others.

The questions and the pupils' answers follow.

Question 1 (Grade I): Write about what you saw this morning on the way to school.

Pupil Response: On my way to school this morning I saw a butterflie. I saw two birds one was blue. I saw some people some autombles some flower and the school house.

Question 2 (Grade V): Write a brief business letter.

Pupil Response:

WATERLOO, ILL.
March 12th, 1937.

Dear Montgomery Ward and co.,

I would like to buy two pairs of shoes. They are in your catalog. They are no. 7762 E and cost three dollars and eighty-nine cents per pair ($3.88) each. I enclose $3.89. Just send them to

Yours truly,
JOHN DOE

Question 3 (Grade VIII): Tell what you think Holmes meant in the last stanza of the "Chambered Nautilus."

Pupil Reponse: If we build our characters and our souls as well as we can, we are like the chambered nautilus, because the chambered nautilus is a sea creature which always goes along growing into larger and larger places to live. This place is his shell and he makes it himself and lives in it. But it always gets bigger each time he adds a new compartment. We make our lives worth-while or useless by our own efforts and it is up to us to build beautiful places in our hearts for our selfs to live in. That is, we live in our selfs and we can be noble and worth-while if we want to. That's what I think Holmes meant in his poem about the chambered Nautilus.

Question 4 (Grade III): Why is it important for us to keep our bodies clean?

Pupil Response: Keping clean keeps us healhy. When the bodies is clean it isnt sick if people don't keep clean get sick, We should bath every day or two also keep our mouths clean our faces clean our finger nales clean and get fresh air

Question 5 (Grade VI): Tell what you can of the way in which good food keeps us healthy.

Pupil Response: Good food is spinach, lettice, carrots, and lots of orange juice and milk, etc. Meat and too much candy will make you sick. Food should be healthy or we will get sick. Clean food and raw things keep you well. Apples and fruits, eggs, butter, milk, celery, raisins, raw things and green things have good vitamins and don't make you sick.

Question 6 (Grade VII): Discuss the earth as a planet and tell about its origin.

Pupil Response: The earth is one of the planets. There are about a dozen, mostly larger than the earth. The sun is a planet. The earth goes around the sun and rolls over ever twenty-four hours. It goes around the sun every year. It started when it broke off of the sun and the moon broke off of the earth where the Pacific Ocean is. The earth is about a billion years old and everything got started living on it when it had a chanct to cool off, the earth is a planet because it is cool. All the planets are held together by gravity because a big body like the sun attracts a smaller one and keeps it in its place.

Question 7 (Grade IV): Describe the life of the early pioneers.

Pupil Response: The early backwoodmen and pioneers were all over the mountain country and fought the Indians. They wore coonskin caps and ate bufallo and deer meat. They lived about a hundred years ago and were very brave. They found gold sometimes and had fights and trapped and hunted. Then they raised corn and had farms and made log cabins to live in. They built churches. They are all gone now.

Question 8 (Grade V): Locate North America and give its boundaries.

Pupil Response: North America is located in the west Hemisfer. On the

north it is bound by the Arctic region on the south by the Sea of Mexico on the east by the Pacafic ocean, on the West by the Atalantic Ocen.

Question 9 (Grade VIII): Discuss the chief reasons for soil conservation and reforestation.

Pupil Response: The need for soil conservation and for reforestation arises from the fact that modern civilization has robbed itself of its heritage in natural resources. The avarice of private exploitation and the greed of monopoly have combined to take from present generations a birthright and legacy such as no previous civilization has known. What greater fallacy can be perpetrated than that of short-sighted exploitation? What mercenary self-enrichment in one generation at the expense of future privation and loss? Shall denuded soil and ruined forests stand ever to remind our children of our own greed? Shall barren hillsides and stark, dead branches of a few remaining trees be monuments to the lack of our vision? Each generation is responsible to the next; and we, as citizens, owe to the future a debt that must not be lightly thrown aside.

RESULTS OF THE SCORINGS

The assigned scores for the nine questions were tabulated on a five-step interval. The frequencies are shown in Table 1.

With the exception of Question 1, each question was so scored by the forty-one teachers as to make the upper limit of the range more than twice as high as the lower limit. Even on Question 8, which was most nearly a purely factual question, the range is as wide as possible. Had the writer anticipated such complete lack of uniformity in scoring, he would have tabulated the results on one-step intervals instead of five-step intervals. In the case of Question 8 the members of the class were asked to give explanations for either high or low scores. One member indignantly asked, "How could anyone give a perfect score on that answer?" She herself had given a score of zero. She then pointed out that the answer was too brief for a fifth-grade pupil, that it was poorly written, that there is no "Sea of Mexico," that the Atlantic is not on the west and the Pacific is not on the east. Another member of the class immediately defended the high score which he had given by pointing out that the answer was long enough to cover the topic, that careless writing should not be penalized in a geography test, that the pupil had intended "Gulf of Mexico" for "Sea of Mexico," and that the two major oceans were correctly placed but merely wrongly named. Since it was evident that the

pupil knew where North America is, he should be marked accordingly. Other teachers entered the argument, which ended with all disputants apparently unconvinced.

TABLE 1

DISTRIBUTION OF SCORES ON NINE EXAMINATION QUESTIONS MARKED BY FORTY-ONE TEACHERS

Mark Assigned	Frequency for Question								
	1	2	3	4	5	6	7	8	9
96–100	8	.....	15	1	.....	1	3	2	14
91– 95	6	.....	8	.....	5	.....	4	.....	8
86– 90	13	2	6	9	4	1	9	2	8
81– 85	4	3	3	6	.....	1	8	.....	1
76– 80	3	4	4	5	6	.....	3	2	5
71– 75	5	3	.....	5	3	3	4	.....	1
66– 70	2	3	.....	4	4	4	3	.....	1
61– 65	.....	1	.....	1	.....	3	.....	.....	.....
56– 60	.....	7	.....	3	5	6	3	5	1
51– 55	.....	.....	.....	.....	1	.....	.....	.....	.....
46– 50	.....	11	3	.....	6	5	3	5	.....
41– 45	.....	.....	1	.....	.....	1	1	2	1
36– 40	.....	1	.....	.....	1	7	.....	5	.....
31– 35	.....	.....	.....	.....	.....	1	.....	.....	.....
26– 30	.....	.....	.....	.....	3	3	.....	3	.....
21– 25	.....	2	.....	.....	2	1	.....	5	.....
16– 20	.....	1	1	.....	.....	1	.....	4	.....
11– 15	.....	.....	.....	.....	.....	.....	.....	.....	.....
6– 10	.....	2	.....	.....	.....	3	.....	4	1
1– 5	.....	.....	.....	.....	.....	.....	.....	.....	.....
0	.....	1	.....	.....	1	.....	.....	2	.....
Total	41	41	41	34*	41	41	41	41	41

* The data were incomplete for Question 4.

SUMMATION OF RESULTS

The study is suggestive of a few tentative conclusions.

The investigator might have assumed before the study was made that, despite the subjective nature of essay-type examination questions, teachers could be expected to mark with some uniformity of judgment provided that certain important variables were controlled. It might have been supposed that, if social background, educational preparation, cultural and industrial environment, level and type of teaching demanded, and experiential background were all closely similar for the various teachers, the results would be more uniform than those in previous studies dealing with widely scattered individuals.

In this study forty out of forty-one teachers were teaching in the same county and were using the same course of study. With few exceptions, all had been born, reared, educated, and otherwise trained in the same county. They lived in a close-knit, somewhat provincial area. They were of a common ancestral background. Practically all were teaching exactly the same subjects in the same grades. They had been educated alike in the same schools of the same county, over half of them attending the same teachers' college.

However, if uniformity in marking is expected under these controlled conditions, the results are disappointing. In no case did the teachers agree closely in their evaluations of any pupil response. The closest agreement was shown in the case of Question 1, a simple question requiring a first-grade pupil to describe the things which he had seen on the way to school. Teachers' estimates of the worth of that pupil's reply varied from below 70 to above 95. On other questions the range was as much as from 0 to 90 or above.

In the case of Question 8 the range seemed almost incredibly wide. This question was therefore submitted, with no preliminary explanation or discussion of the study, to nineteen student teachers of the elementary grades in the Brush Training School at Southern Illinois State Normal University. Each teacher was asked to record his name with the score which he submitted. Every effort was made to secure careful estimates from these teachers. It is assumed that they fully expected their estimates to be recorded with other evidences of their work in student teaching. Nevertheless, the range of the nineteen estimated scores was from 0 to 95.

There seemed to be no significant constant error to explain the variations. Only about a half-dozen of the teachers seemed to score uniformly high or uniformly low. About an equal number of the teachers assigned extremely low and extremely high scores among the nine questions. The investigator was unable, therefore, to suggest any specific reasons for the variations in judgment.

The conclusion seems warranted that teachers cannot estimate reliably the value to be assigned to the answers for essay-type examination questions, even when the teachers have the advantage of unusual similarity with one another in the matter of cultural background, present environment, educational preparation, and actual teaching experience.

SELECTED REFERENCES ON PUBLIC-SCHOOL ADMINISTRATION. II

WILLIAM C. REAVIS AND NELSON B. HENRY
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The January number of the *Elementary School Journal* presented selected references on general administration, state school administration, city school administration, and supervision. The references presented in this article are concerned with teaching staff, school finance, business management, and public relations. The period covered in the selection of the references is November 1, 1936, to October 31, 1937.

TEACHING STAFF

47. CHAMBERS, M. M. "New Laws Touching Teachers," *Nation's Schools*, XX (October, 1937), 29–31.

A review of legislative enactments in 1937 respecting training, certification, tenure, retirement, and salaries of teachers.

48. DAVIS, HAZEL. "Minimum Salary Laws for Teachers," *Nation's Schools*, XIX (February, 1937), 39–41.

Summarizes arguments for minimum-salary laws for teachers.

49. HALL, ROBERT KING. "Recent Court Decisions on the Dismissal of Teachers," *Educational Administration and Supervision*, XXIII (January, 1937), 21–34.

A review of important court rulings on issues involving the validity of alleged causes of dismissal of teachers.

50. JOHNSON, EVELYN C., and MORRIS, ELIZABETH H. "Considerations concerning the Selection of Prospective Teachers," *School and Society* XLVI (August 14, 1937), 222–24.

Argues that adequate and scientific selection of prospective teachers requires determination of (1) the essential characteristics of successful teaching, (2) the personal traits related to such characteristics, and (3) effective means of measuring these traits.

51. *Minimum-Salary Laws for Teachers*. Washington: Committee on Tenure of the National Education Association, 1937. Pp. 38.

Summarizes the varying types of minimum-salary laws for teachers now found in twenty states and tells something of the operation of these enactments.

52. MOELLER, HUGH C., HAMER, O. STUART, and BOWERSOX, FRED C. *Personal Problems in School Management.* New York: Newson & Co., 1936. Pp. 384.

An interesting presentation, in dialogue form, of problems in school management which are disturbing to prospective teachers.

53. SIMON, DONALD L. "Qualifications and Salaries of Teachers in Smaller Schools," *American School Board Journal*, XCV (July, 1937), 40, 78–79.

The author discusses the inequalities of teachers' salaries in smaller schools and recommends a state schedule and the elimination of small school districts.

54. "Statewide Legislative Provisions for Teacher Welfare," *Journal of the National Education Association*, XXVI (February, 1937), 58–59.

A tabular presentation of legislative provisions for teacher welfare.

55. *Teacher Personnel.* Review of Educational Research, Vol. VII, No. 3. Washington: American Educational Research Association of the National Education Association, 1937. Pp. 237–354.

This volume reviews the literature in the field of teacher personnel for the years 1934, 1935, and 1936. It contains a useful bibliography of the research carried on in the field for the three-year period 1934–36.

56. *Teacher Retirement Systems and Social Security.* Research Bulletin of the National Education Association, Vol. XV, No. 3. Washington: Research Division of the National Education Association, 1937. Pp. 91–151.

Discusses the benefits which will accrue to teachers under the Social Security Act. Points out that benefits accruing from provisions for the teacher group are likely to be more generous than provisions made by the federal government for workers in general.

57. *The Teacher and Society.* First Yearbook of the John Dewey Society. Written in collaboration with William H. Kilpatrick (editor) and others. New York: D. Appleton-Century Co., Inc., 1937. Pp. vi+360.

A general discussion of the social aims of education and of the status and problems of the teacher with respect to these aims.

58. THURSTON, LEE M. "The Wrong and Right of It," *Nation's Schools*, XIX (April, 1937), 23–24.

A discussion of the importance of professional ethics among teachers.

59. THURSTON, LEE M. "More about Teachers' Codes," *Nation's Schools* XIX (May, 1937), 37–38.

Recognizes weaknesses of some of the attempts at formulating the ethical standards of the teacher but argues that in the long run a great deal of good may result.

60. UMSTATTD, J. G., and HANSON, ERNEST M. "Preferences of Superintend-

ents in Teacher Selection," *Minnesota Journal of Education*, XVII (March, 1937), 281–82.

The authors discuss the factors which influence superintendents in the selection of teachers.

61. WHITNEY, FREDERICK L. "Trends in Methods of Teacher Improvement," *American School Board Journal*, XCIII (December, 1936), 18–19.

Compares the principal methods of teacher improvement used thirteen years ago with those in use at the present time. From this comparison definite trends in teacher improvement are discovered.

62. WOODS, ROY C. "Teacher Tenure and Retirement," *Educational Administration and Supervision*, XXIII (May, 1937), 377–82.

The author discusses present-day problems of teacher tenure and retirement. Several cases are presented to show the necessity of establishing a set of guiding principles.

SCHOOL FINANCE

63. ASHBY, LYLE W., and DAWSON, HOWARD A. "The Harrison-Black-Fletcher Bill: Federal Participation in Financing Schools," *Journal of the National Education Association*, XXVI (February, 1937), 49–56.

A vigorous plea for support of proposed legislation providing federal aid to equalize educational opportunity.

64. CARR, WILLIAM G. "School Finance, 1930," *Nation's Schools*, XVIII (December, 1936), 25–27.

Discusses conditions and trends existing before 1930 which were responsible for at least part of the fiscal troubles now confronting the public schools.

65. CHAMBERS, M. M. "New Laws on Finance," *Nation's Schools*, XX (August, 1937), 29–31.

Notes tendency toward the establishment of newer forms of taxation as basis of school support.

66. CHISHOLM, LESLIE L. "School Support during the Depression," *School Executive*, LVI (August, 1937), 486, 492.

Discusses the basic economic ability of the richest and of the poorest states to support education during the years of the depression.

67. CORNELL, FRANCIS G. *A Measure of Taxpaying Ability of Local School Administrative Units.* Teachers College Contributions to Education, No. 698. New York: Teachers College, Columbia University, 1936. Pp. viii+114.

"The writer proposes in this study to throw light on the questions: (1) Is it possible to develop a technique for the measurement of local taxpaying ability in terms of regularly reported data on related economic factors? (2) To what statistics may states not having equalized valuations of property look for measuring local taxpaying ability where assessed valuation is not considered reliable?"

68. *Federal Support for Education.* Research Bulletin of the National Education Association, Vol. XV, No. 4. Washington: Research Division of the National Education Association, 1937. Pp. 153–84.

A summary of the arguments for federal aid, with emphasis on the economic and the social factors underlying the need for federal support of education.

69. *Financing Public Education.* Research Bulletin of the National Education Association, Vol. XV, No. 1. Washington: Research Division of the National Education Association, 1937. Pp. 56.

A discussion, based on statistics, of the cost of public education in 1934 and the resources and the contributions of federal, state, and local governments.

70. HAMLIN, HERBERT M. "Twenty Years of Federal Aid," *School Review,* XLV (April, 1937), 257–65.

Discusses problems which have appeared during twenty years' use of federal funds in vocational education. Suggests a program for future use of federal aid.

71. HENRY, DAVID D. "Federal Aid, Again," *Nation's Schools,* XX (August, 1937), 19–20.

Advocates a program of federal aid limited to the construction of school buildings and scholarships for needy students, federal control of the educational procedures thereby being avoided.

72. HENRY, NELSON B. "Conflicting Views on Federal Aid," *Elementary School Journal,* XXXVII (March, 1937), 509–16.

Summarizes the proposals of prominent educators, noting fundamental points of disagreement. Supports the view that a plan of federal aid be developed experimentally.

73. MORT, PAUL R. "Three Controlling Principles of School Financing," *American School Board Journal,* XCIV (May, 1937), 82.

Discusses three principles governing budgetary procedure, accounting, and auditing.

74. NORTON, JOHN K., and NORTON, MARGARET ALLTUCKER. *Wealth, Children, and Education.* New York: Teachers College, Columbia University, 1937. Pp. xviii+100.

A review of various measures of economic ability of the several states and their efforts to support the public schools. The conclusion is that federal aid is essential to adequate school support on a nation-wide basis.

75. PETERSON, B. H. "Public Hearings on School Budgets in the United States," *American School Board Journal,* XCIV (May, 1937), 47–48.

A report on an inquiry into state school laws to determine the different types and provisions for public hearings.

76. REUSSER, W. C. "Permanent School Funds in Wyoming," *School and Society,* XLVI (August 21, 1937), 247–48.

Urges reform in procedures involving control, investment, and auditing in order that the permanent school funds of Wyoming may be safeguarded.

77. WILKINS, EUGENE G. *Public School Tax Management in Texas.* Teachers College Contributions to Education, No. 703. New York: Teachers College, Columbia University, 1937. Pp. 106.

This study presents and evaluates two methods of assessing and collecting taxes in the state of Texas from the vantage point of the relative advantages and disadvantages to the public schools.

BUSINESS MANAGEMENT

78. "The Allotment of Supplies in Los Angeles," *American School Board Journal*, XCV (July, 1937), 98.

Discusses the results of an investigation on the allocation of school supplies in Los Angeles and gives an account of practices which are found elsewhere.

79. BARROWS, ALICE. "Planning School Buildings," *School Life*, XXII (May, 1937), 268–70.

A report on the school plant being constructed for Dyess Colony, Arkansas.

80. BENBOW, SPENCER D. "How Janitors Get Their Jobs," *American School Board Journal*, XCV (September, 1937), 31–32, 100.

Report on the replies to a questionnaire respecting present practices in the selection of school janitors.

81. CARPENTER, W. W. "Training the Superintendent in Schoolhouse Construction, Operation, and Maintenance," *Texas Outlook*, XXI (February, 1937), 28–30.

An outline of a training course in schoolhouse construction, operation, and maintenance offered at the University of Missouri for superintendents.

82. ENGELHARDT, N. L. "Better School Business Management," *School Executive*, LVI (November, 1936), 96–98.

Presents a plea for the improvement and the professionalization of school business administration.

83. HIBBERT, R. W. "The Distribution of Public School Supplies," *American School and University*, IX, 161–64. New York: American School Publishing Corp., 1937.

A treatment of a few outstanding problems of management in the distribution of public-school supplies.

84. JENKINS, H. E. "Saving on School Fire Insurance," *School Executive*, LVII (September, 1937), 32–33.

Investigates the economy and the utility in insurance carried on school buildings.

85. JOYNER, S. C. "Distributing School Insurance to Local Agencies," *American School Board Journal*, XCV (September, 1937), 50–51.

Discusses the bases on which the distribution of school insurance is made to local agencies in Los Angeles.

86. LAWLER, EUGENE S. "Avoiding Troublesome Defects by Forethought in School-Building Planning," *American School and University*, IX, 29–32. New York: American School Publishing Corp., 1937.

Considers the defects in school buildings which could have been avoided by proper forethought.

87. *School Accounting Documents for the Guidance of Boards of Education.* Prepared by the Finance Division of the New York State Education Department. University of the State of New York Bulletin, No. 1094. Albany, New York: University of the State of New York Press, 1936. Pp. 38.

Describes procedures and accounting documents which will provide accounting safeguards for the custody of public funds and lay the foundation for orderly and systematic business practices.

88. SLATER, C. P. "Problems of Business Management of the Schools," *American School Board Journal*, XCIV (February, 1937), 29–31.

A plea for greater efficiency in the business management of schools, with a discussion of budgetary problems, school accounting, and purchasing practices.

89. SMITH, H. L. "Planning the School Building to Satisfy Anticipated Changes in the School Program," *American School Board Journal*, XCIV (January, 1937), 21–23.

Considers the importance of planning school buildings to accommodate anticipated changes which are gradually gaining recognition.

90. "Thirty-six Principles for the Selection, Purchase, and Management of School Supplies and Equipment," *American School Board Journal*, XCV (July, 1937), 39.

Contains a list of thirty-six principles from which school boards may formulate policies with respect to school supplies.

91. WEGLEIN, DAVID E. "PWA Is One Step toward What Should Be a Permanent Policy for Schoolhouse Construction," *Nation's Schools*, XIX (April, 1937), 39–40.

Notes the stimulation which was given to school-building construction through grants and loans by the Public Works Administration.

92. WITHAM, ERNEST C. *Problem Studies in School Administration.* New York: Prentice-Hall, Inc., 1936. Pp. 186.

A new type of textbook in school administration based on actual problems and situations.

PUBLIC RELATIONS[1]

93. CRAWFORD, C. C., and HAINES, JAMES CLAYTON. "Evaluating Methods of Contact between the School and the Home," *Appraising the Elementary-*

[1] See also Item 540 (Ellis) in the list of selected references appearing in the November, 1937, number of the *School Review*.

School Program, pp. 310–12. Sixteenth Yearbook of the Department of Elementary School Principals. Bulletin of the Department of Elementary School Principals, Vol. XVI, No. 6. Washington: Department of Elementary School Principals of the National Education Association, 1937.

Discusses and evaluates methods of school publicity for securing better contact between the school and the home.

94. DAVIS, GEORGIA. "Knowing the Neighborhood," *Nation's Schools*, XVIII (December, 1936), 31–32.

A description of efforts made to organize pupil activities on the basis of community conditions.

95. GARLIN, R. E. "Informing the Public," *Nation's Schools*, XX (August, 1937), 37–38, 40.

Discusses importance and methods of keeping the public informed about changes in the school curriculum.

96. GRINNELL, J. ERLE. *Interpreting the Public Schools*. New York: McGraw-Hill Book Co., Inc., 1937. Pp. xii+360.

Discusses current procedures in educational public relations. The treatment is enriched with much illustrative material.

97. LEVENSON, WILLIAM B. "Radio—Good Will Ambassador," *School Executive*, LVI (July, 1937), 424–26.

Suggests that the radio be used in an effort to increase public support of schools and outlines a series of fifteen related radio programs centered in the theme "the school's need for increased public support."

98. *Parent-Teacher Manual*. A Guidebook for Congress Parent-Teacher Associations. Washington: National Congress of Parents and Teachers, 1937. Pp. 132.

Presents the objectives of the parent-teacher association and outlines the program to be followed by local units of the National Congress of Parents and Teachers.

99. REEDER, WARD G. *An Introduction to Public-School Relations*. New York: Macmillan Co., 1937. Pp. xii+260.

It is the purpose of this book to discuss the importance and the characteristics of an efficient public-relations program in the public schools and to suggest desirable ways and means of conducting such a program.

100. SCHELLHAMMER, FRED M., and HERVEY, LEON. "School Publicity," *School and Society*, XLV (March 13, 1937), 379–80.

Describes a program of news and publicity through contributions to the press by a committee of pupils interested in journalism.

101. SLEMONS, AGNES. "As a Publicity Medium," *Nation's Schools*, XX (July, 1937), 19.

Describes a method of acquainting the public with schoolroom activities by means of the school paper.

102. STEPHAN, M. R. "Highlighting School Relations," *Illinois Teacher*, XXVI (September, 1937), 20–21.

Describes a program of teacher visitation, culminating in a successful American Education Week program in which teachers, parents, and pupils co-operated. The work in connection with the program was correlated with class activities.

103. TEBOW, ERIC T. "Planning Your Publicity," *Nation's Schools*, XVIII (November, 1936), 21–22.

Describes a co-operative plan of school publicity involving both lay and professional leaders of the community.

104. WILLIAMS, CHESTER S. " 'On Our Way'—Forums," *School Life*, XXII (March, 1937), 207–8, 210.

Shows recent trends in adult civic education and tells of the progress of communities in the planning of public discussion.

Educational Writings

REVIEWS AND BOOK NOTES

Refined measures of the ability of the states to support education.—Since the publication of the first statistical survey by the United States Bureau of Education, the gross inequality of educational opportunity in the states has been the concern of educational statesmen.

In 1905 Commissioner William T. Harris ("Some of the Conditions Which Cause Variation in the Rate of School Expenditures in Different Localities," *Proceedings and Addresses of the National Education Association*, XLIV [1905], 195–214) pointed out that the states differed in assessable wealth per capita and discussed the relation of these differences to variations in school expenditures. When his method is used, Nevada in 1900 is found to have had seventeen times as much wealth per child as Mississippi.

In 1926 John K. Norton (*The Ability of the States To Support Education*. Washington: National Education Association) measured the ability of the states to support education by combining the average annual current income of each state with one-tenth of its wealth. He found that Nevada was six times as able to support schools as Mississippi.

In 1936 Leslie L. Chism (*The Economic Ability of the States To Finance Public Schools*. Teachers College Contributions to Education, No. 669. New York: Teachers College, Columbia University) measured the ability of the states to support education by estimating the tax revenue which could have been raised through the uniform application of the model system of state and local taxation proposed by the National Tax Association. He found that, by allotting 31.27 per cent of total tax revenue to education, California could have $98 per child and Mississippi $17.

Mabel Newcomer (*An Index of the Taxpaying Ability of State and Local Governments*. New York: Teachers College, Columbia University, 1935) measured the relative ability of the states to finance education by estimating the yield of the following six taxes: personal income, real estate, business income, corporation organization, stock transfer, and severance. The range in taxpaying ability per capita was from $390 in Delaware to $10 in South Carolina and Mississippi. The reason for the extremely high ability in Delaware was that 42 per cent of the estimated national yield of the corporation-organization tax accrued to that state as a result of its lenient incorporation laws.

Mort (Paul R. Mort and Others, *Federal Support for Public Education*. New York: Teachers College, Columbia University, 1936), using the Newcomer calculations as a criterion, developed an index of ability made up of a series of items, including value added by manufacture, farm cash income, and net retail sales. Mort's measure of educational need is based on average daily attendance corrected for the cost effect of (1) the relative number of children attending at the elementary- and the secondary-school levels, (2) the need for transportation resulting from sparsity of population, and (3) the variation in cost of living in the states. Because of the need for transportation in the western and mountain states, their relatively high ability to support education is scaled down. Because of the relatively low average daily attendance, low cost of living, and small secondary-school enrolment in the poorer states, their ability is scaled up by this procedure.

A publication by John K. and Margaret Alltucker Norton[1] reviews the previous studies in this field and presents a new index of the economic resources of each state. Their index includes the following ten economic items: (1) income reported for federal income tax, (2) farm cash income, (3) value of farm real estate, (4) factory wage earners, (5) value added by manufacture, (6) motor-vehicle registrations, (7) bank resources, (8) production of electric power, (9) petroleum and natural-gas production, and (10) stock transfers. The last three items are arbitrarily given one-third the weight of the other seven.

Chapter i of the Nortons' study presents evidence that the United States is economically able to finance an adequate system of education. Chapters ii and iii consist in a review of previous studies. Chapter iv deals with the efforts of the states to support education and concludes that the poorer states make a slightly greater effort to support education than do the richer states. Chapter v presents measures of the adequacy of financial support as related to ability and effort. It was found that Mississippi, with 33 per cent of the average ability to finance schools, makes 26 per cent more effort than the average state and is able to raise only 40 per cent as much per child as the average for the nation.

One cannot help wishing that investigators in this field would give more attention to therapeutics and less to the refinement of measures of symptoms. We know that the educational needs and the economic resources of the nation are unequally distributed; that there are twice as many children per adult in the poorer states as in the wealthier states; that 31 per cent of the nation's children live on farms and must be supported and educated by farmers who receive but 9 per cent of the nation's income; that the clothing, food, and shelter of the children in the poorer areas are as meager as their educational advantages; and that these children will migrate and become our neighbors as adults. The important questions are: Why do these conditions exist and what should we do about them? Will federal subsidies to the poorer states cure the malady or

[1] John K. Norton and Margaret Alltucker Norton, *Wealth, Children, and Education*. New York: Teachers College, Columbia University, 1937. Pp. xviii+100. $2.00.

merely treat the symptoms? If the federal government provided the school, could the share cropper, on his $300 annual income, take his twelve children from hoeing and picking cotton and send them to school adequately clothed and nourished? It is probable that regional economic planning is the correct answer, not federal subsidies to education.

WALTER W. COOK

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Pupil-progress policies examined.—One of the most troublesome and the most perplexing problems of elementary-school organization and administration has been the promotion of pupils. In recent years attention has been given to plans which involve continuous, regular progress for all or practically all pupils, pupil failure and the repetition of grades being thus reduced to almost zero. Since there are many unanswered questions regarding continuous or regular promotion practices, Akridge's study[1] is a welcome addition to the gradually accumulating research data. The specific problem of his thesis was "the cumulative effect of the regularity or the relative regularity of pupil progress upon the central tendency and the variability of mental age and achievement at a given grade level in the elementary schools. Since retardation and acceleration are the devices that are utilized to bring about irregular pupil progress, the problem may properly be regarded as applying with equal force to those devices as well as to the relative regularity of pupil progress" (p. 2).

The pupil population on which the study was based included all resident and transient pupils in Grade IV and all resident pupils in other grades who were of normal chronological age or of normal progress for Grade IV in nine "regular-progress schools" and in eight "irregular-progress schools." The former are defined as schools in which not more than approximately 10 per cent of the pupils had been retarded or accelerated by the time they reached the four-year or fourth-grade level, while the latter are schools in which not less than approximately 20 per cent of the pupils had been retarded or accelerated by the time the four-year or fourth-grade level was reached. A battery of standardized group tests (one mental test and six achievement tests) was administered to each of 1,175 pupils during March and April of 1933. Comparisons of the test scores (translated into grade scores) were made in terms of three groupings; (1) the grade group, which included all children then enrolled in Grade IV; (2) the age group, which consisted of all pupils of normal chronological age for Grade IV; and (3) the progress group, which consisted of all pupils, regardless of actual grade placement, whose progress would be regarded as normal if they had been classified in Grade IV. These three groupings were arranged for the "regular-progress schools" and also for the "irregular-progress schools."

[1] Garth H. Akridge, *Pupil Progress Policies and Practices.* Teachers College Contributions to Education, No. 691. New York: Teachers College, Columbia University, 1937. Pp. viii+76. $1.60.

Limitations of space prevent further discussion of the many detailed steps and statistical procedures, which appear to have been carried out with unusual care. Let us turn to the author's findings. A comparison of the grade groups showed that "the differences between the achievement and mental test scores produced by pupils . . . . of the regular- and irregular-progress schools were not, on the whole, large enough to be significant statistically in either central tendency or variability" (p. 17). The comparison of the progress groups showed that the "average achievement and average mental age . . . . were significantly higher in the regular-progress schools than in the irregular-progress schools. . . . . The tendency on the part of the progress group in the regular-progress schools to be more heterogeneous in mental age was not significant. . . . . There was a tendency, though not a significant one, for the progress group in the irregular-progress schools to be more heterogeneous in achievement than a similar group in the regular progress schools" (pp. 22–23). Comparison of the chronological-age groups revealed the mean scores in achievement and in mental age to be higher in regular- than in irregular-progress schools; there was a tendency for the chronological-age group in the regular-progress schools to be more heterogeneous in mental age and more homogeneous in achievement than a similar group in the irregular-progress schools, although the differences were not significant statistically.

Another series of analyses presented the differences between different cross-sections of the school population at the fourth-grade level but within schools employing the same general type of pupil progress and entrance policies and practices. These data show:

> . . . . differences . . . . in the means and in the standard deviations of mental-age scores taken between the grade and progress groups and between the grade and age groups. None of these differences was large enough to be regarded as significant. The evidence seemingly justifies a tentative conclusion to the effect that the complete prevention of irregular progress either together with or without the complete prevention of under-ageness and over-ageness probably would not have affected significantly either the average level of mental age or the homogeneity of mental age at the fourth-grade level [p. 40].

The conclusions regarding achievement are similar to those on mental age. A supplementary analysis of the evidence on transient pupils indicated that transient pupils do not significantly affect the average level or the homogeneity of mental age or achievement in either the regular-progress or the irregular-progress schools.

The majority of the comparisons in this study show either advantages for the regular-progress schools or no statistically significant differences between the two types of promotion plans. It is unfortunate that the author's seemingly clear-cut findings are complicated by the fact that the average mental abilities of pupils in the regular-progress schools were slightly higher than those of pupils in the irregular-progress schools. This difference in mental age created for the author the constant problem of attempting to estimate how much of the

difference was due to difference in mental ability. In spite of the fact that this type of study is extremely difficult to make, its increased ultimate value should have prompted the author to use greater care in the selection of schools representing the two types of promotion policies; enough schools in various parts of the country have been using regular-progress practices so that it should have been possible to find schools with pupil populations more nearly comparable. However, in spite of this unfortunate limitation, the study does much to increase knowledge about the relation between promotion policies and the development of children. The burden of proof is gradually changing from those who advocate regular pupil progress to those who adhere to the significance of retardation and acceleration as essentials of school management.

HENRY J. OTTO

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Interpreting education.—The evolution of the educational process at the elementary level from a fireside exercise of a conscientious parent to a social institution of great complexity and interest demands either that the parents who first assumed the responsibility of education abandon that responsibility or that they maintain it through a systematic plan of interpretation based on a philosophy that the school is an extension of the home. Although Reeder, in his new book,[1] makes the statement that the need for a program of public-school relations lies less in the *justification* of education than in the *amount*, *kind*, and *cost* of it, he yet advocates continuous education of the public in the meaning, the importance, and the value of public instruction.

Outlining the commonly advanced criteria for school information programs, and discussing the usually available agents and agencies, the author places justifiable emphasis on the board of education in its dual capacity as a receiver of information and as an interpreter of the schools. In placing on the superintendent responsibility for interpreting to the board of education, the author's injunction to employ tact betrays some practical experience with these officers:

> In trying to keep the board members informed it is usually desirable for the superintendent to give them their information surreptitiously and without them knowing that he believes they *need* information. This practice is recommended because many board members believe that they are already experts in school administration and would resent any inference that they were not [p. 23].

Recognition of this restriction does not, however, hamper the author in his suggestions for a thoroughgoing program of education for school-board members. This program includes systematic review of school policies and regulations, reading assignments in magazines and books, and familiarity with all school publications. He even suggests a notebook for each board member, proposes frequent school visitation, attendance at educational conventions, and

[1] Ward G. Reeder, *An Introduction to Public-School Relations*. New York: Macmillan Co., 1937. Pp. xii+260. $2.25.

personal conferences with the superintendent of schools. In its capacity as a dispenser of information and good will, the board of education carries a heavy responsibility, which is not met in such offensive practices, too frequently followed, as nepotism and favoritism in employing school teachers or in awarding contracts for supplies, continuous "ax-grinding" and "hobby-riding," wasting money through inefficient business procedure, and unceremonious dismissal or demotion of efficient school employees.

The stress laid by the author on the ethics and canons of journalism and the teaching of newspaper appreciation may be a thinly veiled hint, though quite in order, that the interpreter can profitably spend a portion of his time renovating and implementing the publicity mediums which he uses. A carefully organized calendar and suggestions for a planned program of news information is presented for the school interpreter who wishes to make the most of that medium. A score card for judging the effectiveness of the school newspaper as a source of school information is offered.

The importance of the school report is stressed, and its common hopelessly archival nature is contrasted with the reports of Horace Mann, which were not only read in his own state and nation but which influenced educational procedure in foreign countries.

An important chapter is devoted to the parent-teacher association, and a curriculum for education of parents is suggested in some detail, with a list of reference material needed for making the program effective. Types of information needed by parents are listed under such topics as "New Trends in Method and Curriculum," "School Finance," "Administrative Regulations," and "Health Needs." Contacts with parents would not be left to the formal relations that exist in a public meeting but would extend to the home through the pupil, the visiting teacher, the school nurse, and the school attendance officer, as well as through circular letters, report cards, and school exhibits.

The author gives the school janitor new emphasis as an agent of school publicity, dispensing of the notion of a day past that all that functionary needs for success in his work is a weak mind and a strong back. The author outlines the part that the janitor of the modern school plays in building appreciation for the school through his standards of housekeeping, his protection of school property, his maintenance of safety and health standards, his personal contacts with the public, and his general information about the school's objectives and accomplishments.

While the author insists on a program of educational interpretation which is continuous throughout the school year, he points to American Education Week as a high spot in this program. During its short life the Week has so abundantly proved its value that the World Federation of Education Associations has recommended the observance of this annual event throughout the world. A seventeen-page chapter outlines the procedure for effective observance.

A significant item in the arrangement of this publication is the presentation after each chapter of questions for class discussion, together with selected refer-

ences which will enable the teacher of educational interpretation to build a reference library extending the discussion of public-relations problems far beyond the scope of the author's own work.

BELMONT FARLEY

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An effective heating program for schools.—School authorities are so beset with problems of curriculum, personnel, and community relations that they frequently accord only the most casual attention to the more ordinary physical aspects of administration. Even the highly essential and expensive school-building program has been the subject of intelligent planning and cost-accounting for only a couple of decades. Another almost equally obvious item of administration, the costly neglect of which reproaches school authorities, is the problem of school heating. Despite the fact that heating constitutes the largest single item of school-maintenance costs, little or no systematic or scientific planning has been in evidence. No complete investigation has been reported, and no adequate directions or recommendations have been published. Such data as are available must be found in a few generalities gleaned from treatises on school administration or drawn from industrial or governmental studies where similar but never identical problems have been partially analyzed.

Consequently McCullough[1] made a somewhat unique contribution to the field of educational administration when he published a study which attempted to evaluate all the factors entering into fuel economy and efficiency. A detailed check list of basic requirements was formulated and submitted to selected engineering experts. The author then made an intensive study of eight New Jersey cities and compared his findings with supposed best practices, as reported by twenty-seven cities throughout the United States. He concluded that the indifference and the inadequacy of earlier study and investigation were paralleled by the lack of efficiency and economy in practice, even in selected communities. An outline of a comprehensive fuel-management program is offered, with the recommendation that it be adopted in all school systems.

Although the check list of basic requirements is so detailed and formidable that the less highly trained personnel of smaller school systems may be frightened away from attempting to apply it, such a program should be helpful to all school administrators and engineers. The author has gone to great trouble to justify the validity of his unique check list and to reconcile all criticism and disagreement. If, in the light of this attempt at self-justification and the admittedly narrow base of application, the reader feels that the rather definite and sweeping conclusion may need further substantiation, he would probably

[1] Ashley M. McCullough, *A Critical Analysis of the Fuel Management Program for Schools: Selected New Jersey Cities Compared with Nation-wide Practice.* Teachers College Contributions to Education, No. 713. New York: Teachers College, Columbia University, 1937. Pp. viii+142. $1.85.

find the author among the first to agree. Foremost among McCullough's recommendations is one urging the extension and the refinement of the investigation and the techniques employed. The reviewer ventures the hope that McCullough himself may be encouraged to extend his pioneering in this important but neglected field.

V. L. BEGGS

SUPERINTENDENT OF SCHOOLS
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A textbook in spelling for the elementary school.—The Foreword of the speller under review[1] presents, in the following series of assumptions, the philosophy on which the speller is based: (1) that the pupil has mastered the spelling of a word in proportion as he uses it correctly and appropriately in his free writing, (2) that teaching precedes testing, (3) that words should be presented when the need for them arises, (4) that the spelling vocabulary should be sufficiently extensive to meet the common writing needs of the child, (5) that the child's training in the mastery of the vocabulary should insure the development of techniques which lead to the enlarging and the enriching of that vocabulary, and (6) that the habit of self-appraisal is fundamental to correct writing in all fields.

With most of these assumptions there is general agreement. One of the assumptions, however, is open to serious question, and another assumption needs some modification. The relative efficacy of the study-test method of presentation and the test-study method is still a matter of conjecture. Until the relative merit of these two methods of presentation can be established on scientific grounds, the factor of economy in learning would seem to suggest the use of the test-study method. The assumption relating to the extent of the child's vocabulary is too limited in scope. It is true that the spelling vocabulary should be sufficiently extensive to meet the common writing needs of the child, but to let the statement end there is not enough. The words should also have permanent value in adult usage.

In the preparation of this speller special consideration was given to the following factors: vocabulary, grade placement, method, plan of study, plan of checking, reviews, provision for individual differences, correlation with other subjects, dictionary work, and spelling rules.

With respect to word selection the authors state that the vocabulary was compiled after careful analysis of authoritative word lists and that six recent lists based on children's writings and interests and two authoritative lists compiled from children's speaking vocabularies were used to develop a basic list. The particular lists from which the content of the speller was selected are not revealed; neither is the method of selection disclosed. The authors state that the word list includes words which have come into common use recently, but

[1] Ralph N. Tirey, Blanche E. Fuqua, and Mary D. Black, *The Life-Use Speller*, Grades II through VIII. Philadelphia: John C. Winston Co., 1936. Pp. iv+234. $0.60.

neither the particular words added under this category nor the method of selecting them is specified.

Children's needs and learning difficulties were used as criteria for the grade placement of words.

"Word meanings" and "language relationships" were used as bases for word grouping. "Vivid perception, intensive and properly distributed practice . . . . in writing situations," and "adequate provisions for contextual use of words" are emphasized as valid principles of methodology.

The technique suggested for word mastery follows closely the plan proposed by Ernest Horn in 1919 ("Principles of Method in Teaching Spelling as Derived from Scientific Investigation," *Fourth Report of the Committee on Economy of Time in Education*, pp. 52–77. Eighteenth Yearbook of the National Society for the Study of Education, Part II. Bloomington, Illinois: Public School Publishing Co., 1919).

A supplementary word list is included in each grade to provide for individual differences, but the method of word selection for the supplementary lists is not stated.

Paragraphs are occasionally used to introduce a unit of work. These paragraphs, according to the authors, are developed around topics selected and graded on the basis of the frequency of their appearance in various courses of study.

The authors declare their belief in the efficacy of mastering spelling rules as means of effecting economy of learning. Accordingly, certain rules have been included for the upper grades. Consistency and the number of words to which they apply were used as the basis for selecting these rules. In the absence of valid experimental evidence, it seems extremely doubtful whether the authors' faith in spelling rules as a means of generalizing training can be justified.

Because of the many strong features which commend it, this book will no doubt occupy a prominent place in a growing list of modernized spellers.

W. S. Guiler

Miami University

Rural life and the depression.—Most Americans are familiar with relief measures which provide food, clothing, work, credit, or school and health facilities. Many know too that in some respects rural communities have suffered longer and more severely than urban communities, partly because of early declines in farm prices and partly because of primitive relief machinery and traditions of local pride. A recent analysis of rural society,[1] based on a comparison of a 1936 study with studies made in 1924 and 1930 of 140 village-centered communities, sets forth conditions and trends in rural life and points out certain implications of the data.

[1] Edmund deS. Brunner and Irving Lorge, *Rural Trends in Depression Years: A Survey of Village-centered Agricultural Communities, 1930–36*. New York: Columbia University Press, 1937. Pp. xvi+388. $3.25.

The book presents facts on the numbers, sizes, and values of farms and on tenancy, incomes, and foreclosures. A chapter on agricultural adjustments reviews mortgage-foreclosure strikes, considers rural co-operative societies, and evaluates the Agricultural Adjustment Act, indicating that farmers favored the act rather than the Supreme Court. "Population Changes" are studied, attention being given to increases in rural population during the depression, the kind of land settled by incoming farmers, and social problems resulting from migration to the country. "Village-Country Relations" are considered in terms of service areas, causes of conflict, types of co-operation, and decline of neighborhoods. Chapter v reviews business and industry as related to the rise and the mortality of retail stores, the proportion of gainfully employed engaged in industry, and incomes in terms of the "parity index" of prices paid and received by farmers. "Rural Banking" is treated through discussion of bank failures, increase in branch banking, and the increase in postal savings during the depression. A chapter on schools reviews the familiar cuts in salaries, length of term, and available supplies, at the instance of taxpayers' leagues or otherwise; state and federal aid for buildings and instruction; the widening community use of school plants; and the misunderstanding of youth problems by many communities. The extent of this misunderstanding in some instances is shown by the passage of merchant-sponsored ordinances that "open-country youth must be out of town by 4 P.M." or by the attitude that the chief problem is to secure " 'benefit of clergy' for 'shotgun marriages' " (p. 175). Two chapters deal with adult education: one with agricultural extension, its growth during the depression, and its shift in emphasis from productive to leisure-time activities; the other with rural libraries, public schools in relation to adult education, and such agencies as granges, churches, forums, and civic clubs. The need of a co-ordinating agency in adult education is emphasized. Chapter x deals with social organizations; their internal change and high turnover; the decline in lodges; the growth of panacea clubs, such as Townsend clubs; and the general increase of women among members. A short, rather weak chapter deals with local government, health, communication, and race relations. Evidence regarding "Rural Religion" leads to the conclusion that the church is losing ground even more rapidly than it did during the the period 1924–30 and that the cause of this loss is largely inefficiency and planlessness in the face of pressing social forces. "Relief in Rural Areas" is studied in relation to vocation, age and sex of population, education of relief clients, attitudes toward relief administered by outside agencies, and the idea that there are marginal workers as well as marginal land. The final chapter discusses the implications of the study and gives broad suggestions regarding social planning and social policy.

The data are presented in 117 tables, with perhaps more textual description of data than is necessary. In numerous respects the trends revealed harmonize with those indicated by census and related sources, with which readers may be partially familiar, but the anchorage to particular communities, illustrated by excerpts from field workers' reports, helps substitute individual definiteness for

statistical generality. The authors fear, unduly, that as social scientists they will be criticized for going beyond descriptive analysis to interpretation of data. Although the final chapter helps in pointing out implications, the abundance of data induces the reader to hope for more in this respect. A decided virtue of the study is found in the possibilities afforded for comparison with the two preceding surveys of the same communities. This feature alone, aside from other virtues, makes the book decidedly worth while for persons interested in the problems of rural social life and change.

HAROLD H. PUNKE

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New stories for the youngest children.—"Adultness," says Lucy Sprague Mitchell, is one of the greatest handicaps that teachers and mothers have in reading literature for the youngest children and in presenting it to them. She and a group of co-authors have prepared a book[1] which has been designed to overcome at least some of this difficulty. The book contains stories for adults, as well as stories for children. All the stories are based on the experiences and the emotions of children from two through six years of age.

The new stories for children are about their own everyday experiences and have been written to supplement "the urban and informational [material] which largely characterized the first *Here and Now Story Book.*" They include "country experiences . . . . stories centered in emotional situations, and frankly humorous yarns" (p. xvi). The authors are teachers; some are mothers; and all are experts who have studied children while living with them. They have recorded, with great care, their observations of the children themselves and of children's reactions to various experiments in the fields of literature and of social living. They have studied the language of children. In other words, they have tried out a "here and now" program and many "here and now" stories. As a result of their research they have prepared this new material for children.

The helps for teachers and mothers are a thoroughly delightful series of personality sketches of children, together with comments. The comments and the sketches "say the same things: one dramatically, the other analytically" (p. xviii). The sketches were prepared from the records of observations of children. The authors have not given a sketch of an individual child who is two or four or six years old. They have, instead, combined their observations and from them have made a composite picture for the reader. This picture presents "two-year-oldness," "three-year-oldness," etc. From these sketches and comments adults are expected to acquire, and undoubtedly will acquire, an understanding of children of varied maturity levels which will prepare them to read the stories and to present them effectively.

This new volume contains illustrations in color and in black and white.

[1] *Another Here and Now Story Book.* Edited by Lucy Sprague Mitchell. New York: E. P. Dutton & Co., Inc., 1937. Pp. xxvi+370. $2.00.

The illustrator has caught the message and the spirit of the authors, and her contribution unquestionably reinforces the text.

Children who have loved the *Here and Now Story Book* and who have brought it to mothers and teachers asking to hear the stories over and over again will be just as devoted to this new book. For this reason parents and teachers will welcome it, and they will also read, with interest and profit, the stories for themselves. The book deserves a place in any situation where there are young children and where there are adults to help the children participate in the enjoyment of this exceptionally interesting and understanding content.

ADA R. POLKINGHORNE

The wonder of numbers.—It is frequently recommended that the mathematics courses of the intermediate grades and of the junior high school include informational material relating to the history and the characteristics of our number system. Lack of suitable reading materials for pupils has perhaps been the chief reason why this recommendation has not been followed more generally. A recent book[1] by a well-known historian in the field of mathematics will, therefore, be welcomed by many teachers.

The book is divided into twelve short chapters. The first three of these show very simply how the need for number grows with increase in the complexity of society and give a brief account of the development in India of the numerals which we use and of the transmission of these figures to Europe by the Arabs. Three chapters develop the reason for the use of ten as the base of our number system and show the importance of place value in number notation. The next four chapters tell of superstitions about numbers and present some magic squares and circles and other number puzzles. The last two chapters deal with the derivation of our number names and tell some interesting facts about number in nature.

This book is less comprehensive than the author's *Number Stories of Long Ago* (Boston: Ginn & Co., 1919) and *Numbers and Numerals* (David Eugene Smith and Jekuthiel Ginsburg, *Numbers and Numerals*. Contributions of Mathematics to Civilization, Monograph No. 1. New York: Teachers College, Columbia University, 1937). It is more simply written than the latter and, because of its direct approach, is more effective than the former. It presents simple aspects of the romance of number in such a way as to live up to its excellent title. It should help to sustain the fascination which number has for many children but which is often killed by the preoccupation of teachers with computational skill and practical applications.

Children of the intermediate grades will enjoy reading the book, but it will also appeal to junior high school pupils whose previous mathematical diet has not included such material.

LENORE JOHN

[1] David Eugene Smith, *The Wonderful Wonders of One-Two-Three.* New York: McFarlane, Warde, McFarlane, 1937. Pp. 48. $1.00.

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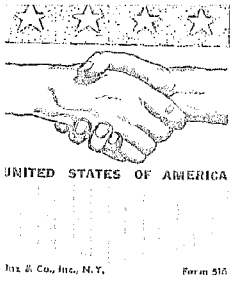

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THE ELEMENTARY SCHOOL JOURNAL

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Educational News and Editorial Comment

BREAKING DOWN FORMALISM AND STANDARDIZATION IN THE ELEMENTARY SCHOOL

In many places the work of the elementary school still suffers from the formalism of the class recitation and from a philosophy of school administration which results in too great insistence on standardized procedures and activities. In a city system where administrative authority is highly centralized and the elementary-school principal is not accorded a large measure of freedom in adapting the educational program of his school to the particular needs of the children attending, there is grave danger that the schools will come to conform to a general pattern even in those activities which most require differentiation.

According to the recently published report of the Philadelphia Public School Survey, the elementary schools of that city are too highly standardized. On this point we quote the following paragraphs from the volume of the report entitled *Summary of Findings and Recommendations*.

Typical of many of the larger city school systems in the United States, Philadelphia's program of public education on the elementary-school level is

highly centralized in organization and control. A commendable result of this exacting line type of administrative organization is a system of elementary schools so efficiently managed that there is practically no waste in skilled classroom teaching, in pupil accounting, and in the selection, distribution, and use of instructional equipment and supplies. A less commendable result is the degree of uniformity that exists throughout the system that practically amounts to regimentation. Each elementary-school organization is as like every other in internal organization and management as it is possible for two discrete things to be similar in form and nature; each of the ten districts is administered similarly; the curricular offerings are the same and administered in the same way all over the city; instructional procedures are practically the same regardless of the widely varying nature of school neighborhoods and consequent differences in native abilities and social backgrounds of the pupils. Mass instruction, according to fairly definite patterns, prevails in all subjects on all grade and ability levels. Time allotments for course of study materials are constant for the city as a whole. . . . .

Of the three types of teaching objectives frequently mentioned in professional literature as being essential to the fullest development of children; subject matter mastery, control of one's mental activities, and control of one's emotional and social tendencies, Philadelphia teachers confine themselves largely to the first. Subject matter mastery techniques employed also rather limit outcomes to those types of learnings that can be well demonstrated in standard testing programs such as factual memorizations and proficiency in the various academic skills. Although not tested by the survey staff, this type of work is apparently well done. Mass teaching is generally practiced with but little significant provision made for individual differences of the learners. All are given the same work to do, and all recite or are involved in the same recitation at the same time. The pupils regularly do *what* they are told to do *as* they are told to do it, *when* they are told to do it. The same patterns of teaching procedures and classroom control are found all over the city.

Some of the recommendations made are as follows:

The elementary-school principal as the responsible head of his school should be freed from many of the unnecessary restrictions that now circumscribe his activities. He should be expected to adopt a program of education that provides specifically for the needs of the children of his school neighborhood however much such a program differs in particular aspects from the city-wide program for elementary schools. He should be expected, with the advice of his assistant district superintendent: (1) to make whatever curricular adaptations in city courses of study as are warranted by the pupil needs of his own district; (2) to plan any internal organization of his school that seems to him and his faculty best; (3) to use whatever classification and promotion policies his educational program demands; (4) to assume the initiative in the selection and rejection of teachers for his own faculty; (5) to assume original responsibility for the super-

vision of instruction in the various departments of his school. In brief, the elementary-school principalship should offer a career in educational leadership to worthy men and women. . . . .

Teacher and principal participation in the formulation of educational policies and in the administration of these policies should be more generally provided. Course of study making, particularly, should be a co-operative undertaking regardless of the size of the system.

The use of pupil and subject matter objectives graded as to pupil ages and school grades for each type of curriculum to direct and control the instructional activities of teachers is much superior to the use of courses of study and time roster mandates. Courses of study in any case should state the objectives to be attained and merely *suggest* appropriate content materials and instructional procedures for attaining them. Variation in the use of these materials and procedures should be encouraged providing the objectives are attained in the allotted term periods.

The philosophy underlying that type of control of learning situations known as the activity program should be generally applied throughout the elementary grades as soon as teachers can adapt themselves to it in order to eliminate the highly artificial types of pattern instruction that is now prevalent, and as a means of vitalizing learning situations (whether or not the activity program itself is used is immaterial). Adequate provision for individual differences may also be readily made within such a program.

The Relation of Educational Administration to Municipal Government in England

In this country the authority to support and to control education is usually vested in a school corporation which is a legal entity separate and distinct from the municipality proper. In some instances authority with respect to the schools is divided between the board of education and the municipal authorities, and in a relatively small number of places the city government is authorized to administer the schools along the same lines that it administers municipal functions proper. For a number of years there has been a growing sentiment among political scientists that the administration of public affairs in a given area should be consolidated in one responsible governing body. There has been in some quarters an insistent demand for the unification of school administration and municipal government within any given area. School people generally have looked on the proposal to consolidate educational and municipal administration with disfavor and, in some instances, with alarm. In view of these differences of opinion, the experience of England is

informing. England has long vested the control of education locally in its regularly constituted municipal bodies. The relation of education to the municipality in England is discussed at some length by D. S. Woods, dean of the faculty of education of the University of Manitoba, in an address published by the University in a volume entitled *A Series of Addresses Delivered during the University Extension Course on Public Administration and Finance.* The following paragraphs are quoted from Dr. Woods's address.

Education is managed locally in England and Wales by 317 county, county borough, borough and urban districts. The population in these areas varies from less than ten thousand to that of the city of London with its millions. In England and Wales these councils administer instruction and finance for approximately twenty-one thousand elementary schools, over eleven thousand of which are under denominational influence. In what we would call purely public or state schools the Board appoints a local manager or managers, and in the nonprovided or denominational schools the Board appoints one-third of the local managers. In all schools the municipal authority has control of all secular instruction.

Each local council is required by law "to refer all matters related to its education powers to an Education Committee, except the power of raising a rate or borrowing money, and must receive and consider the report of the Education Committee before exercising its powers in any such matter, except in case of urgency." The Council may not delegate its power of striking rates or borrowing money. The majority of the members of the Education Committee must be members of the Council; "co-opted members may be appointed, who should consist of persons of experience in education, or persons acquainted with the needs of the various kinds of schools in the area, and women as well as men must be included among the members of the committee." The Education Committee has tended to become an authority within an authority, but its entire policy is the decision of Council as well as co-opted members and its recommendations *re* both instruction and finance are reviewed by the Council. By this means England has brought the local administration of instruction and of finance into relation. All local services are consolidated within the Council and administered by its committees. The worth of all local services may be evaluated by the one governing body and the ability of the area to provide estimated, and rates levied accordingly by the same body. Moreover, by delegating to local managers in certain schools the control of religious instruction and to schools in general wide latitude in the choice of curriculum, they have provided for the particular wishes of minorities and for the special educational needs of different types of communities. They are not so concerned about uniformity as we are in Canada.

The National Board of Education, really a department of the national gov-

ernment, has shown a tendency to delegate its powers to the local council authority even although it pays to the councils more than 50 per cent of the total cost of education. The number of its school officers and inspectors has rapidly decreased while at the same time there has been erected an administrative and supervisory staff appointed by and under the direction of the local County Council and its Education Committee. The National Board of Education has set certain standards and has become a distributor of educational information but otherwise has left to the local governing body a large measure of freedom in determining the nature and extent of instruction and has left to the local body the right to determine school rates in accordance with its educational needs and its ability. The grants to schools by the National Board afford a large measure of financial protection to the teaching body. I attribute this attitude toward control of education, as before stated, to the confidence which the English people have that local units of government will conform to the national cultural standards and traditions at the same time as they evolve a curriculum closely related to the needs of the community.

Here and There among the Schools

Extending teacher participation in the determination of policies.—As a result of the establishment of a School Policies Council in Denver, Colorado, last November, the teachers, principals, and other employees of the school staff of that city will henceforth share to a greater extent the responsibility of framing and executing educational policies. The new council, an outgrowth of an earlier Curriculum Council, is composed of all principals, directors, and supervisors, and of teacher representatives of all the schools. It is hoped that eventually all employees of the school system will be afforded representation on the council. Superintendent A. J. Stoddard serves as chairman of all general meetings. The initial study undertaken by the new organization will be an analysis of community problems in their relation to the curriculums of the schools.

In a recent issue of *School Review*, the official publication of the Denver Public Schools, Superintendent Stoddard comments as follows on the importance of the School Policies Council:

> If school administrators are to achieve a democratic situation in education, they must not only acknowledge the large part to be played in the development of educational policy by all professional workers, but work to the end where the intellectual resources of all members of the school corps become available in the task of determining procedures.
>
> A real democracy in school affairs cannot exist if both the framing of policies

and the administration of them are in the hands of administrative officers. The task of administering policies which the new commission adopts will, of course, belong to administrative officers of the school. It should be noted also that all policies are in the end subject to review and determination by the Board of Education.

In the October, 1937, issue of the *Elementary School Journal*, we commented at some length on the Atlanta, Georgia, plan for securing the co-operation of elementary-school principals in the study of fundamental policies and procedures affecting the city school system. It may be remembered that originally the plan called for sixteen committees composed of a number of elementary-school principals, each committee to study and report on some special problem, for example, the curriculum or the principal as administrator. Assistant Superintendent M. E. Coleman now informs us that during the present year the plan has been somewhat modified. This year each elementary-school principal is taking a problem which she may study alone or with the help of the teachers of her own faculty. The following problems, selected from a long list, are among those being studied: "Follow-up of Elementary Pupils in Junior and Senior High Schools," "Welfare Work:—The Problem of Relief," "Home Work," "A Program for Parent Education," "Visual Aids in Elementary Education," and "Community Councils."

Interpreting the school to the community.—There come to our desk numerous illustrations of the growing interest in the cultivation of school-community relationships. O. S. Glover, superintendent of Edina-Morningside Public Schools (post office, Minneapolis, Minnesota), has sent in a copy of a mimeographed bulletin entitled "Know Your School," which is sent from time to time to the patrons of the schools. During the present year attention will be confined to three broad fields of interest: (1) changing conceptions of education, (2) educational planning for the future, and (3) the curriculum. In the discussions of the curriculum an effort will be made to acquaint patrons with what the school seeks to accomplish at each grade level.

The co-ordination of education and the community.—The January, 1938, issue of the *Journal of Educational Sociology* is devoted to a discussion of the history and the operation of the Yonkers plan of

community organization. Bertha Smith, assistant superintendent of schools, comments as follows on the beginnings of the plan:

The Yonkers plan of community organization, consisting of a central co-ordinating council and ten affiliated neighborhood councils, grew accumulatively into its present status through a series of co-operative studies made by various groups, the results of which successively pointed to this much-needed but unanticipated consummation.

Briefly told, two groups worked simultaneously but independently; one made a sociological survey of Yonkers which culminated in the organization of neighborhood councils, the other examined the co-ordinating council plan in relation to the prevention of delinquency. These two groups met at the end of a year's respective work and pooled the fruits of their studies. A committee from both groups was selected, through the efforts of which the Yonkers Co-ordinating Council was formally organized in November, 1936.

Neighborhood councils, however, had been organized by members of the survey group during the process of the survey, the previous school year, six months before the Yonkers Co-ordinating Council was launched. These functioning units sent representatives to the central Co-ordinating Council, as did other organizations, agencies, and institutions. Under stimulation of the survey group, the organization of neighborhood councils continued; each linked itself with the Yonkers Co-ordinating Council and the plan began to shape itself.

At this writing there are ten neighborhood councils, all with representatives in the Co-ordinating Council, and several other groups in more or less embryonic stages of development. The Yonkers plan is therefore still in evolution. Future accretion depends on felt needs.

The account of the development of the plan is organized under the following divisions: (1) the sociological research on which the plan was founded, (2) neighborhood councils, (3) junior councils, (4) the Yonkers Co-ordinating Council, and (5) the co-ordination of education and the community.

Radio programs to supplement school studies in Chicago and New York.—Both Chicago and New York have adopted a plan for a more extensive use of the radio in the public schools. The *Chicago Tribune* comments as follows on the Chicago plan:

Use of educational radio programs to supplement the regular classroom work in the public schools will be inaugurated today. Prepared by the school board's radio-education council, the first of weekly bulletins recommending the programs to students will be mailed to 394 principals. A similar guide will be distributed each Tuesday until the end of the term.

The bulletin lists programs that go on the air during school hours as well as in the late afternoons and evenings, and on Saturday and Sunday. For sub-

sequent class discussion teachers are asked to suggest any programs, broadcast outside of school hours, that have some connection with regular work. At the discretion of the teacher, radios will be connected in the schoolrooms to give pupils an opportunity to listen to any programs while classes are in session, Harold W. Kent, director of the council, explained.

Principals are requested to post the bulletins in their schools so they will be available to all teachers and pupils. Each recommended program is followed by a notation of the school grade to which it applies.

The council was created last year by the Board of Education following the successful use of radio in keeping the pupils abreast of their work when an infantile-paralysis outbreak forced the closing of the public schools. Since its inception it has developed two programs, broadcast weekly, and has aided in preparation of material for a third.

A weekly program for children, under the direction of the council by teachers of kindergarten and primary grades, will begin next week. Scripts are being prepared for several series of programs that will begin next fall.

However, this is the first time the board—through the council—has utilized established educational programs to supplement the regular school work. In December the radio committee of the Illinois Department of Public Instruction began a survey of schools throughout the state in expectation of establishing a similar service for teachers in rural districts in lieu of undertaking to create special programs. A report from this committee is expected later this month.

The following statement regarding the New York plan was published in the *New York Sun*.

Convinced that educational horizons still are untouched by radio, the New York City school system is planning to embark upon an extensive program of classroom broadcasting. Starting March 1, daily broadcasts will take place. This may be increased later to two or three a day, it became known yesterday.

Not intended to take the place of the classroom teacher, the radio will be used, rather, to supplement the school curriculum. A committee is working on a plan whereby pupils throughout the city can listen to the programs at the same hour. Two sets of broadcasts are being prepared—one for the high-school and the other for the elementary-school level.

In addition, a series of ten weekly programs will deal with problems of peculiar interest to parents. The vocational-guidance department of Samuel Tilden High School is undertaking this phase of the experiment. Parents will be informed, in a personal way, of the opportunities before their children, and what the high schools are doing to meet their needs. . . . .

All broadcasting will be supervised by members of the school staff. The script is to be written by teachers but, whenever feasible, students will be invited to participate in the writing, either as an extra-curriculum project or as a classroom activity. The radio presentations will be made entirely by pupils.

Already, many boys and girls have been chosen, following competitive auditions. No dearth of candidates was found, it was said.

Teaching units in the social studies for the primary grades.—Under the general direction of Hugh S. Bonar, superindendent of schools, and Phila Humphries, director of the elementary schools, the teaching staff of the Manitowoc, Wisconsin, schools has developed a three-volume series of teaching units for the social studies in the first three grades. The first volume, entitled "The Home," deals with the immediate environment of the first-grade child. The second volume is also confined to the local community, but it stresses the interdependence of the people within the community. The third volume, "The Greater World Community," develops the theme of the interdependence of the child's city and other communities. Some of the units are presented in a complete form, showing objectives, procedure, materials used, child participation, and results. The five units of the third volume are: (1) "What Manitowoc Gives to the Greater World Community," (2) "What the Greater World Gives to Manitowoc," (3) "The Relationship of Transportation to Our Interdependence within the Greater World Community," (4) "The Relationship of Communication to Our Interdependence within the Greater World Community," and (5) "Manitowoc Then and Now—A Summary Unit Tracing the Development of Manitowoc from the Beginning."

Planning administrative and supervisory policies and procedures in advance.—From Charles J. Dalthorp, superintendent of schools, Aberdeen, South Dakota, we have received a mimeographed bulletin entitled "Supervisory and Administrative Programs of the Principals and Supervisors of the Aberdeen Public Schools." Superintendent Dalthorp finds that a yearly program set forth in writing helps to crystallize objectives and to stimulate determination for achievement. The distribution of the programs to all the teachers in the school system also serves the purpose of familiarizing them with the plans for achievement in the system as a whole. In the bulletin for 1937–38 the supervisor of health and the principal of each school in the system describe in detail the objectives of their administrative and supervisory programs and indicate the procedures to be employed in carrying the programs into effect.

A Guide to the Literature on Diagnosis and Teaching of Reading

Teachers at all levels—elementary, secondary, and college—who are interested in the findings of research with respect to the diagnosis and the teaching of reading will welcome the appearance of a recent bulletin published by the Educational Records Bureau, 437 West Fifty-ninth Street, New York City. The bulletin was prepared by Arthur E. Traxler and is published under the title "Summary and Selected Bibliography of Research Relating to the Diagnosis and Teaching of Reading, 1930–1937." About twenty pages are devoted to a summary of reading studies, and about sixty pages are devoted to an annotated bibliography of 283 titles. Among the topics discussed in the summary of findings are the following: "Reading readiness," "Reading interests," "Reading in the content subjects," "Vocabulary studies," "Reading tests and testing procedures," "Speed of reading" and "Activity programs and reading achievement." The following statement quoted from the Introduction gives a fairly adequate idea of the general purpose and scope of the bulletin.

This booklet has been prepared to present a summary and selected bibliography of the recent research literature that may be of particular interest to teachers of reading in elementary and secondary schools and colleges. A special attempt has been made to include significant studies dealing with the causes of reading disability, the diagnosis of reading difficulties, and the remedial and corrective teaching of reading. Theoretical discussions of the teaching of reading, however excellent, have been excluded from the bibliography, except when they have emanated from a background of research data.

The main purpose of the booklet is to make available to administrators and teachers interested in conducting programs of either remedial or developmental reading a convenient source of reference for diagnostic techniques and teaching procedures that have been tried out and evaluated. However, certain related studies have been included, since it is obvious that a background of information about such topics as reading readiness, reading interests, and reading in relation to the content subjects is essential to the intelligent planning and successful carrying-out of a program of diagnosis and instruction.

In preparing this seven-year summary, frequent use has been made of the much more complete annual summaries of reading investigations prepared by Dr. W. S. Gray. Persons interested in going beyond the present selective summary will do well to consult the Gray summaries in the *Elementary School Journal* up to and including 1932 and in the *Journal of Educational Research* since 1932.

Two New Magazines

Teachers and parents will welcome the appearance of a new magazine designed to provide children with wholesome, interesting, and inspiring reading. The new magazine appeared in January of this year and bears the title *World Horizons*. The editor is Joseph B. Egan. On the editorial board are a number of well-known educators: among others, Fred C. Smith, academic dean of the University of Tennessee; Grace E. Hackett, supervisor, Boston Public Schools; Garry Cleveland Myers, lecturer and author; David Morton, professor of English, Amherst College; and Everett L. Getchell, professor of English, Boston University. Every month the journal will be built around some fundamental idea, for example, "Opportunities Ahead," "Man's Gift to Man," and "Treasures within Reach." In addition to fiction, biography, and poetry, there are articles which fall within the classification of sociology, nature-study, folklore, photography, art, science, and vocational guidance. *World Horizons* is published at 23 Central Street, Wellesley, Massachusetts, and the subscription price is $3.50 a year.

The second magazine is of a very different kind. Carrying the title *Psychiatry: Journal of the Biology and the Pathology of Interpersonal Relations*, it will present "authoritative but relatively nontechnical treatises, reports, surveys, reviews, and abstracts." The journal will be published quarterly, at 1835 Eye Street, N.W., Washington, D.C. After January 31, 1938, the subscription price will be $6.00 a year.

New Facilities for Educational Broadcasting in the United States

The Federal Communications Commission announced recently that twenty-five channels in the ultra-high frequency band have been reserved for nonprofit educational broadcasting. It is contemplated that nonprofit educational agencies will use broadcast stations "for the purpose of transmitting educational programs directed to specific schools in the system for use in connection with the regular courses, as well as for routine and administrative material pertaining to the school system." Programs of an educational nature will be broadcast to classes in schools and to the general public. All programs must be educational or recreational in character. No

broadcasts of a sponsored or a commercial character will be permitted.

John W. Studebaker, United States Commissioner of Education, sees in the new arrangement great possibilities for the development of education in this country and for progress in our national life. In a recent release of the United States Office of Education, he comments as follows on the announcement of policy of the Communications Commission:

I am pleased to learn that the Federal Communications Commission has set aside a definite portion of this important national resource exclusively for educational purposes. The reservation of twenty-five channels means that a large number of allocations can be made to educational groups throughout the United States. Engineers point out that a minimum of about fifty stations in various parts of the country may use each frequency, since the ultra-high radio waves are distinctly local in character. This indicates that there is room in the sector reserved for at least 1,250 local, nonprofit, educational radio-broadcasting stations.

Opportunity to use these channels presents a great challenge to American education, but I am confident that education can rise to the opportunity to use these facilities which should affect the scope and progress of education and our national life with results just as revolutionary as those which followed the invention of the printing press. . . . .

Many will wonder what significance this new allocation of the F.C.C. holds for school organizations. It is difficult to answer this question because it is almost impossible to imagine the variety of uses to which the nonprofit educational stations may be put. They will be used to stimulate the interest of students in subjects they would not ordinarily be eager to learn. This is being done at present, to a limited degree, in some cities over commercial stations. Detroit is engaging in such broadcasts. There will be broadcasts to classrooms as there now are to science classes in Rochester. Model lessons broadcast by especially expert teachers in various subjects will gradually improve classroom teaching. Cleveland is one city now following this practice. The University of Wisconsin's radio classes in singing doubtless will be duplicated in many other areas. Emergency use of radio for educational purposes is an important consideration. Chicago and Long Beach have made emergency use of radio to reach pupils in their homes when schools were closed.

These frequencies can be a great boon to the isolated rural school with its one or two teachers. At present county superintendents or supervisors may be able to visit each school in the county or district only once or twice a year. Establishment of a radio station in conjunction with a county school system would enable the superintendent or supervisor to be in constant touch with all schools. The rural-school curriculum could be vastly enriched through the proper development and use of education by radio.

The Federal Communications Commission's announcement points out that these local, nonprofit, educational stations will be authorized to transmit educational and entertainment programs to the general public in every city and town maintaining such a station. With this broad charter it is not impossible to anticipate not only a major step forward in the education of children but also programs for educating adults greatly extended beyond anything now existing. I can see that various types of programs involving many discussions of civic and social problems of interest to the general public which require more time than can be fitted into present-day radio schedules, may be broadcast successfully over these educational stations at times during the day when it is most convenient for people to listen.

Mr. Studebaker also stated that the United States Office of Education would begin immediately to collect the information that educational organizations will need in order to make application for these frequencies. The Office will also supply advice on such matters as equipment, personnel, and programming.

A Guide to the Purchase, Preparation, and Use of Instructional Materials

Teachers, principals, and superintendents throughout the country will be interested in a mimeographed volume recently published by the State Curriculum Laboratory at the University of New Mexico. The volume bears the title "Materials of Instruction: Manual and Buying Guide." That the term "materials of instruction" is broadly conceived is evident from the following statement of Marie M. Hughes, director of the State Curriculum Laboratory, which is quoted from the Introduction.

"Materials of instruction" include all the tangible items which are a part of, or contribute to, the experiences which the child has under guidance of the school. The magnitude of the topic, materials of instruction, may now be clearly perceived. It includes the school building and grounds; the furnishings and equipment; all books, maps, paper, study sheets, practice exercises, tests, et cetera, which are utilized; also, it includes the flowers, the grasses, the vegetables, pieces of rock, small and large creatures the children may bring to school; moreover, it includes all those things which the teacher and children use, see, feel, and talk about when they go outside the four walls of the school; too, it includes the talks and information which the people of the community give the children.

Throughout the volume it is recognized that the program which the school is attempting to carry out will largely condition the instructional materials required. The first chapter presents a vivid

picture of the great variety of functional activities now found in the better schools of the country. A second chapter is devoted to problems pertaining to the selection, purchase, care, and distribution of materials of instruction. The next two chapters consider the production and the refinement of locally prepared materials, one chapter being devoted to the teacher's laboratory and the other to teacher-prepared materials. The final chapter is entitled "Classified List of Equipment and Supplies: A Manual and Buying Guide."

The volume is much more than a mere guide to the purchase and the preparation of instructional materials. Throughout, the authors have been aware that purpose and method cannot be divorced from the instructional materials employed. In a way, the volume is a practical treatise on methods as well as on materials.

Who's Who in This Issue

William A. Brownell, professor of educational psychology at Duke University. H. A. Gray, associate director of field studies of Erpi Picture Consultants, Incorporated, New York City. James A. Fitzgerald, professor of education at Loyola University. Richard A. Barnes, dean of Olivet College, Olivet, Michigan. Florence L. Goodenough, research professor of the Institute of Child Welfare, University of Minnesota.

A CRITIQUE OF THE COMMITTEE OF SEVEN'S INVESTIGATIONS ON THE GRADE PLACEMENT OF ARITHMETIC TOPICS

WILLIAM A. BROWNELL
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The person who challenges "reforms" now being made in arithmetic instruction in the name of "readiness" invites unhappy consequences. He may be accused of bias arising from vested interests. He may be charged with being a traditionalist, an educational reactionary. He may be condemned for inhumanity toward children and even for ignorance of child psychology. Nevertheless, it is high time, I think, to examine critically the research basis claimed for the "reforms" to which allusion has been made.

By now there is a rather respectable body of research literature on various phases of arithmetic "readiness." No other single research study or group of studies has, however, attracted the attention which has been accorded the reports of the Committee of Seven. This committee of seven members of the Superintendents' and Principals' Association of Northern Illinois first published its recommendations in 1930 in the Twenty-ninth Yearbook of the National Society for the Study of Education (10) and has since published them or discussed them in at least ten other places. Its work has unquestionably affected practice widely but, I fear, not always wisely.

PROCEDURE IN THE COMMITTEE OF SEVEN'S INVESTIGATIONS

The general experimental procedure employed by the Committee of Seven is so familiar[1] that I shall describe it but briefly here. By means of questionnaires the committee first determined the usual grade placement of an arithmetic topic, such, for example, as the division of fractions. Next, it made arrangements with co-operating schools to teach each topic in a series of grades: in the usual grade and in one or two grades immediately preceding and following the

[1] For fuller accounts see the references numbered 3, 5, or 10, among others, at the end of this article.

usual grade. The committee then supplied each co-operating school with definite directions as to time allotment, instructional materials and methods, tests, and the like. At the start, intelligence tests and arithmetic-foundations tests were administered to all pupils—intelligence tests for the purpose of securing mental-age ratings and foundations tests for the purpose of measuring mastery of the skills deemed essential to the learning of the new topic. Instruction then followed over a specified period of time. Final evaluations were made in terms of scores on retention tests given some weeks after the conclusion of teaching.

The committee's findings were then translated into mental-age standards. That mental age was chosen at which at least three-fourths of the children could show 80 per cent mastery as revealed on the retention tests. Thus, it was decided, the fifty easier subtraction facts may be taught at the mental age of six years and seven months, but multiplication and division of fractions should not be taught before the mental age of twelve years and three months.

I know of but few competent workers in the field of arithmetic who accept the Committee of Seven's proposals for mental-age (or grade) placement. In spite of this fact, criticisms have been slow to appear in print. The most noteworthy exception to this statement is the series of interchanges between Raths (6) and Washburne (14), the committee chairman, which enlivened the *Educational Research Bulletin* in the year 1932. Yet there have been criticisms, and these criticisms have come to the ears of the committee.

LIMITATIONS ADMITTED BY THE COMMITTEE OF SEVEN

The *Journal of Educational Research* for May, 1936, carries the last of the articles by Washburne, in which he discusses the experimental "limitations" of the committee's studies. These admitted weaknesses I should like to list here, as nearly as possible in the words of the article (17: 698–99).

1. The committee's proposals should have been tested by repeating the experiments. Check investigations being impracticable for financial reasons, the recommendations can be regarded as only tentative.

2. The findings had to be reported in cruder units than are desirable, since lack of funds precluded the making of the "minute detailed analyses" which the committee would have liked to undertake.

3. The committee "necessarily had to dictate for each topic a specific method of teaching and specific materials. . . . . Whether improvement in the method would change the mental-maturity placement is, of course, purely hypothetical."

4. The committee does not undertake to say "what the effect would be of changing the time allotment for teaching."

5. "The standard of 80 per cent retention by three-fourths of the class . . . . was of course purely arbitrary." A higher standard would have raised, and a lower standard would have depressed, the mental-age requirement for each topic.

6. The "foundations tests as prepared by the committee are inadequate" since they lacked "elements that would show whether or not the child had a real concept of the meaning of the process that he was going to undertake."

7. "The tests in the process taught" were "not always sufficiently complete."

Seven experimental limitations are, then, conceded by the committee, or at least by its chairman; and seven weaknesses would seem to be enough to cast doubt on the worth of any conclusions that can be drawn from the committee's experimental data. One is hardly prepared, therefore, for the following sentence which occurs less than two pages later: "Is it not always better to act on the basis of even tentative scientific results than on the basis of a tradition which has always been unsatisfactory and which has resulted in many school failures?" (17: 701.) Thus, in the same article the committee recognizes the experimental limitations of its work and calls for a more general adoption of its recommendations. The only way, apparently, to reconcile this inconsistency is to assume that the experimental limitations are of little consequence. There is space here to consider but two of these limitations, the first having to do with the factor of instruction, the second with the factor of measurement.

CRITICISM I. THE INFLUENCE OF THE INSTRUCTIONAL PROGRAM

As has been previously stated, the committee dictated the kind of instructional program to be followed with each topic in each cooperating center. The committee grants that different methods of teaching and different materials *might* have led to different mental-age standards, but it regards this possibility, to use the words of the chairman, as "purely hypothetical." Such a grudging acknowledgment might have been justified in 1930, at the time of the first report, although even then the relation between instruction and suc-

cess in learning was known to be close. Be that as it may, in 1936, even in 1932, the question was no longer "purely hypothetical," the last element of uncertainty having been removed by the announcement of Beall's careful study on the teaching of long division (1).

In Beall's study every attempt was made to select helpful teaching procedures, to control the steps of presentation, to motivate learning, and to correct errors in understanding and in computation as soon as they appeared. Long division was introduced, not in the second term of Grade IV as has been the practice traditionally, but in the *first* term of Grade IV. Beall's subjects were thus several months younger than pupils usually are when they encounter this process, and they were correspondingly handicapped in general experience and in arithmetical training. Nevertheless, these beginning fourth-grade pupils demonstrated conclusively their ability to learn this new process more than two full years before the Committee of Seven's mental-age standard for the process.

More recently Grossnickle (4) has published his study on the teaching of long division. Grossnickle found that his pupils, like Beall's, could learn long division at the mental age of ten years and three months,[1] without waiting until they had attained the committee's standard of twelve years and seven months.[2]

These studies, which clearly reveal the dependence of mental-age and grade standards on instruction, justify caution concerning all the committee's recommendations. It is futile to argue that we must adopt the committee's standards merely because we do not know *how much* difference instruction makes in the case of each topic. We have experimental evidence that the difference *may* be as much as two full grades, and this amount of difference may conceivably be the rule rather than the exception.

[1] The Grossnickle investigation did not use the divisors 13–18, the "demon divisors," but it introduced all other difficulties in the process. On the other hand, neither did the Committee of Seven's retention test contain examples with divisors between 13 and 18.

[2] These studies show that long division *can* be taught in Grade IV. They do not prove that long division *must* be taught or *should* be taught in that grade. There may be reasons, apart from readiness, which make Grade V preferable to Grade IV for the teaching of this process. As a matter of fact, it is my belief that Grade V is the place for this topic.

In conclusion, then, we need not deny validity to the Committee of Seven's mental-age standards *for the instructional program which it employed*, but we should be careful always to add this limiting clause. At most, the committee's standards will surely apply only in schools which follow *exactly* its instructional materials; deviations from this program make doubtful the validity of the standards. In this connection two facts should be noted. The first is that the possibilities of important instructional deviations are almost infinite. Changes in the order of teaching the sub-skills, in the quality of previous preparation, in the length of the daily period, in the effectiveness of the motivation, in the number of days allotted the topic, in the thoroughness of diagnosis and remedial instruction—changes in any of these details may be enough to invalidate the committee's findings. The second fact to be noted is that in none of its ten or more articles has the committee given any information about its instructional program for the topics investigated. How, then, is a given school system to know how closely its instructional program parallels that of the committee? How, then, is it to know whether it can properly adopt any of the committee's standards?

CRITICISM II. WEAKNESSES IN THE MEASUREMENT PROGRAM

I shall try to establish three points about the committee's measurement program which again call into question the soundness of its experimentation and hence the soundness of its conclusions. These three points relate to (1) the difficulty of the tests, (2) the method of scoring the tests, and (3) the interpretation given the test scores.

1. *Undue difficulty of the tests.*—The strategic importance of the retention tests in the committee's investigations should be clear: topics were placed at the mental age when three-fourths of the pupils first attained 80 per cent mastery. From this rule it follows that the harder the tests, the more mature the children would have to be before they could qualify as "ready" and the later in the school course the topic in question would be placed.

The one test published by the committee is that in the process of subtraction (10: 650). This test consists of eight examples. Only one example has two-place numbers in both minuend and subtrahend; only two examples can be solved without borrowing; half of

the examples have zero in either tens' or ones' place in the minuend; and five of the eight examples require borrowing twice. The general picture is that of a test which is excessively weighted with hard items.

The same impression is gained from an examination of certain of the unpublished tests, which are generously made available upon application to the committee. The test in long division comprises seventeen examples, all with two-figure divisors but with quotients which vary from one to three figures. In eleven of the seventeen examples the divisors end in the figures 6 to 9, the difficulty of the test being thus greatly increased. Its difficulty is still further enhanced by a time limit of fifteen minutes. In such a brief period of work no checking was possible, and the strain of the time pressure must certainly have encouraged confusion and chance errors.

The tests on operations with decimals[1] are equally open to criticism, both because they are too difficult and because they involve examples of a highly artificial character. It is, then, in these tests themselves that one explanation is found for the committee's postponement of addition and subtraction of decimals to the mental age of twelve years and six months, and of multiplication and division of decimals until the mental age of fourteen years and ten months.

The first charge to be made against the committee's measurement program is, then, that its tests predetermined excessively high mental-age standards. Other tests would certainly have led to different results and to different grade placement. Tests better adapted to their function would, I think, have been easier and would have had more liberal time allowances. Such tests in all probability would have yielded mental-age standards much closer to those of traditional practice.

2. *Over-strict methods of scoring.*—The second charge against the measurement program arises from the method of scoring the tests. The procedure was to give credit only for correct answers. While

[1] The test on addition and subtraction of decimals is made up of twenty examples, to be solved in twenty minutes. Example 6 calls for the addition of .47, 734, .13, and .005. Three of the other addition examples also involve ragged decimals of unusual types. Example 14 requires that 8.444 be taken from 14. Of the eight examples in subtraction, four employ ragged decimals. The last three examples are of the type: 14.08+9.5+7.398−6.007.

this procedure probably introduced no errors in the tests on the number facts, with equal probability it did introduce errors in the case of the more complicated processes, such as long division and operations with decimals and fractions.

The objection raised to the committee's scoring procedure is no quibble, nor is it based on mere conjecture. Although in the nature of things the extent of the effect of the method of scoring cannot be reported here in exact terms, the probability of large influence can be illustrated. Consider as a concrete case the one example $.5 \times .1057$. All of a pupil's work on this example could be correct save for a single slip on a multiplication fact. This one error, properly chargeable against ignorance of the multiplication facts, would nevertheless be chalked up against multiplication with decimals, with obvious consequences to the test score and ultimately to the mental-age standard for the process. The point of the illustration is that, had the scoring allowed credit for understanding of processes (the crucial element), instead of for correct answers alone, the committee's high mental-age standards would almost certainly have been lowered.

3. *Ambiguous meaning of test scores.*—The third objection to the committee's measurement program relates to the interpretation of test scores. Let me illustrate from the subtraction test. The easiest example in this test is $49 - 46$, and perhaps the hardest is $508 - 199$. It is not unusual to teach the first of these examples in Grade II and the second late in Grade III. In other words, a full year commonly elapses between the teaching of the two examples at the extremes of difficulty in this test.

Just what does a pupil's score on this test mean? It can represent little more than his general achievement on a year's work in the subtraction of whole numbers. This information, however, is not the kind which we need for the accurate placement of topics. We do not, according to our present imperfect plan, locate at any one point in the grades a total process like the subtraction of whole numbers, or even as large a segment of a process as that lying between $49 - 46$ and $508 - 199$. Instead, we divide up the process and teach part at a time, and the tendency now is to spread the teaching of topics still more widely than has been the practice in the past.

I am well aware that the Committee of Seven has recognized the possibility of spreading instruction on topics. Here, for example, is a quotation from the 1936 article: ". . . . the statement that a topic must not be taught below a given level never means that certain easy aspects of it may not be introduced at a lower level" (17: 703). Here is another statement, made as early as 1931: "As teachers have always realized, the easier elements of some topics can be learned successfully at an earlier age than the more difficult elements" (3: 200).

Two points should be made about these statements. The first point is that the committee's tests, instead of helping us to detect the easier elements of processes, actually tend to obscure such differences in difficulty. The second point is that, by reporting the placement of topics as wholes (with few exceptions), the committee has encouraged the concentration rather than the stretching-out of instruction. The committee acquiesces in the earlier teaching of easy aspects of topics, it is true. Nevertheless, the teacher and the principal who over and over again read in the committee's articles the assertion that children cannot learn this or that topic before such and such a mental age are not in the mood for piecemeal adoption. Rather, they act on the all-or-none principle. They place the addition and the subtraction of decimals at ten years and eleven months, long division in Grade V or in Grade VI, and so on.

In summary.—The committee's measurement program is open to three serious objections: (1) The tests inevitably yielded high mental-age standards because they were unduly hard. (2) The method of scoring, which allowed credit only for completely correct answers, also had the effect of raising the mental-age standards. (3) The composition of the tests and the treatment of the test scores has reanimated the discredited practice of organizing the curriculum strictly according to topics.

NEED OF SCRUTINY OF OTHER EXPERIMENTAL FACTORS

With this I conclude my discussion of the Committee of Seven's experimentation as such. Technical factors other than the two I have considered (instruction and measurement) should in the future receive critical attention, namely, such experimental factors as

time allotment, number of subjects used, and the quality of the foundations tests and of previous training. I leave these matters of experimental technique in favor of two other major criticisms. These last two criticisms bear, first, on the committee's conception of maturation and, second, on the effect of its proposals on instructional practice and on future research in arithmetic.

CRITICISM III. THE COMMITTEE'S VIEW OF MATURATION

1. *Various conceptions entertained by the committee.*—I have said that I intend to criticize the committee's conception of maturation. As a matter of fact, the committee entertains, not one, but three conceptions of maturation.

The first conception is implied in the following quotation, which can be matched from several other articles: "In general the results indicate that there is a stage of mental growth for each topic in arithmetic before which it is wasteful of time and energy to attempt to teach it, and a stage beyond which there is little to be gained by further postponement" (5: 20). Here maturation is thought of as some kind of inner ripening—a form of growth which is quite unaffected by experience. The ability to multiply fractions, for example, is a special function which matures by reason of internal compulsion. There is little that can be done to influence the rate of its growth, for such a function is not susceptible to external influences. We can but wait until it has reached the required stage of development. This conception of maturation may be called the "inner-growth conception."

The second conception of maturation is implied by the committee's practice of stating standards in terms of mental age. When the committee asserts that the addition of decimals cannot economically be taught before the mental age of twelve years and six months, it says, in effect, that arithmetical maturation is a condition of *general* intellectual development. The child can learn to add decimals when he has attained a mental status of twelve years and six months. Less mental maturity materially limits the success of any attempt to teach the process. In some way general intelligence is the essential element to successful learning in arithmetic. Let us call this conception of maturation the "M.A. conception."

The third conception of maturation is illustrated by the following quotation: "This graph makes it evident that it is extremely inefficient to teach children to add and subtract fractions before they thoroughly understand what fractions mean" (13: 218). Here emphasis is laid on the importance of previous learning. Readiness to master a new arithmetic topic is seen to be the product of particular kinds of experience, namely, arithmetical experiences. This third conception, which may be denoted the "experience conception," is much more evident in recent than in early articles by the committee (for example, Item 16).

Here, then, are three conceptions of maturation: (1) the "inner-growth conception," (2) the "M.A. conception," and (3) the "experience conception." Maturation can hardly be all these things. Which is it?

2. *Criticism of conceptions.*—I know of no justification whatever for the "inner-growth conception." We have come well away from this conception as it was formerly applied to instincts and later to general scholastic aptitudes, such as mathematics and spelling. Now, apparently, the doctrine has returned in even more extreme form. Once more teachers are to "strike when the iron is hot," but this time the "iron" is made up of highly specialized arithmetical ideas and skills. In the light of modern psychology such a hypothesis is wholly untenable.

The "M.A. conception" is likewise, I think, quite without adequate support. Nobody does, or can, deny the close relation between mental maturity and success in learning arithmetic, but this is far from saying that mental maturity, in and of itself, conditions success in arithmetic. To illustrate my point: we can conceive of a boy with a mental age of twelve years who had never even heard of arithmetic. His general intellectual development would, of course, be of great service to him in learning arithmetic if arithmetic were presented to him at this time, but it would be no substitute for instruction; he could learn arithmetic only by engaging in the appropriate kind of arithmetical activities. Similarly, under conditions of school instruction, mental maturity facilitates learning in arithmetic by enabling the pupil to profit from instruction.

According to the third conception of maturation, arithmetical

development is viewed as the product of arithmetic experiences. This conception, it seems to me, is sound. A child is "ready" to learn a new arithmetic topic when he has control of all ideas and skills prerequisite thereto. Incidentally—but only incidentally—he will also probably have attained a general maturity which will make learning easier. The main thing, however, is that his previous arithmetic experiences will have brought him to the stage where he can now take on the new learning.

The third conception of maturation is exceedingly helpful in thinking about grade placement. It serves to emphasize the essential continuity of learning; it leaves room for instructional influences in effecting readiness for learning; and it provides a sure and sensible basis for ordering our teaching. According to this conception we shall place an arithmetic topic, not arbitrarily in this grade or at that mental age, but wherever children can learn it economically. In all probability there is not a *single* mental age or a *single* school grade at which a topic *must* be taught, but there are *several* at which it *may* be taught. Once we are sure that children have had the necessary foundational experiences (and this fact can be ascertained through appropriate tests), we can teach that topic, whether it be at the mental age of ten years or at the mental age of nine or eleven, whether in Grade V or in Grade IV or VI. The placement of a topic will vary with the system of presentation—in other words, with the way in which learning is organized.

If this third conception of maturation, the "experience conception," is correct, then there is every reason to object to the one invariable set of mental-age standards proposed by the Committee of Seven.

CRITICISM IV. EFFECT OF THE COMMITTEE'S WORK ON FUTURE TEACHING AND RESEARCH

My fourth criticism, like the third, relates less to the Committee of Seven's experimentation than it does to the effects of its work, particularly on arithmetic instruction and on research in the teaching of arithmetic.

In the practical business of arithmetic instruction, changing the place of arithmetic topics has withdrawn interest from more funda-

mental issues. However we may deprecate the fact, it is understandable that teachers and principals should hope that, by moving topics about (chiefly upward), they will realize large economies and perhaps remedy most of the arithmetical ills in their schools. Here again the Committee of Seven has recognized the danger and issued a warning, but the warning is lost in the midst of arguments for the adoption of its mental-age standards.

Other workers in the field of arithmetic must have had my experience. During the past four or five years I have received many letters the contents of which may be summed up somewhat as follows: "In our schools we have adopted the Committee of Seven's placement of topics; what should we do next?" Such letters come to me too late. I wish that they might have been written *before* the new standards were adopted. Then I might have replied:

> First of all, study the problems of your instruction. Find out precisely where difficulties are arising and why they arise at these points. Vary your instruction; supplement the textbook presentation; devise new materials; insert new steps if necessary, or eliminate useless steps; and then teach again. When you are convinced that nothing else will relieve the situation, change the grade placement of topics, but only as a last resort. Moving topics upward is an easy way out, but it may be nothing more than a retreat from your problem. At best it is but a superficial solution, and in the end it may raise more problems than it solves. If you do move topics, however, be prepared continuously to scrutinize your instruction and to make all the adjustments that the changes may require.

So far as research is concerned, the danger is no less real that our interest in grade placement may divert us from matters of larger moment. What we need everlastingly to investigate is how to teach arithmetic better. Perhaps we *are* introducing topics too soon—before we have created readiness through appropriate experiences. Postponement of topics is one solution, but only one. Greater advances may be made by improving the learning activities which precede the study of each topic where it now stands. The gains that have followed effort of this kind in the case of primary number certainly justify the hope of corresponding gains at higher levels.

SUMMARY AND FINAL WORD

I have criticized the experimentation and the proposals of the Committee of Seven on four grounds. I have stated that its mental-

age standards are of doubtful validity for two reasons: (1) These standards can properly apply only in schools which employ the committee's methods and materials of instruction, and we do not know what these are. (2) The standards are almost certainly too high because of the committee's methods of measurement. I have also expressed two fears concerning the consequences of the committee's work. The first is that it will foster faulty views of maturation; the second, that it will deflect interest from more fundamental problems.

Changes in the time of teaching arithmetic topics and parts of topics are inevitable. In fact, these changes are now being made. The changes, however, which will stand the test of the years are, I am confident, not those sponsored by the Committee of Seven nor any others to be arrived at by their methods of investigation or derived from their views of growth in arithmetical ability. Rather, the changes will be those which will be seen to be essential when we know much more about the way in which children learn arithmetic and, hence, about the way in which we should teach arithmetic.

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AUDIO-VISUAL LEARNING AIDS FOR THE PRIMARY GRADES

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The steadily growing number of instructional sound films listed in the *Educational Film Catalog*[1] for many fields of learning at the elementary-school level directs attention to two questions: (1) What contributions can properly prepared sound-film materials make to the learning process at these grade levels? (2) How may such teaching aids be utilized effectively?

It is the purpose of this article to discuss these questions, particularly with respect to their significance for primary-grade instructional procedure, since research and experimentation on the subject are meager, the field is rich with possibilities, and findings are logically applicable also to the intermediate and the upper grade levels.

The typical child enters Grade I when he is approximately six years of age. His primary senses and innate curiosity have permitted him to acquire some knowledge of his environment, and in accordance with his mental ability such information has already shaped itself into concepts of varying nature and complexity. Because of his immaturity such concepts are limited in number, and some no doubt are erroneous, owing to the fragmentary nature of the visual and the auditory stimuli constituting his learning experiences.

Observation will have indicated that his hearing vocabulary developed long before he could talk. That is, early in infancy he acquired an understanding and an appreciation of spoken words much in advance of his ability to speak the words. Later in life, when he could use words for asking questions, he became equipped with a powerful learning tool so that, by the time he reached Grade I, he was familiar, in a superficial way, with the nature and the relationships of many things in his immediate environment. He was not so well conditioned, however, to objects and relationships beyond

[1] *Educational Film Catalog*. New York: H. W. Wilson Co., 1937.

the effective functioning of his limited learning facilities. The school, therefore, is supposed to equip him with learning tools, foremost of which is the ability to read, so that he may pursue the quest of finding out about the world and its ways.

At this time in his life he meets an obstacle which too often holds up or retards his continued learning. Reference is made to the difficulty of learning to read and to the time required for him to develop the degree of reading ability necessary for acquiring further learning. In this age of technology it is fitting that consideration be given to how primary-grade teachers can use mechanical and other devices to increase the effectiveness of their efforts, how they can provide the child with meaningful learning experiences independent of reading ability and conventional teaching aids, particularly where such mechanical devices can increase the scope of the child's knowledge and understanding while concurrently serving as a means of facilitating the process of learning to read. Toward this end the sound motion picture already has been drafted into service, and with its unique property of being able to reproduce when needed a multitude of realistic, dynamic learning experiences, it promises to surmount many barriers to human learning in general and to contribute materially to the education of beginning learners in particular.

ADVANTAGES INHERENT IN SOUND MOTION PICTURE MATERIALS

Scientifically treated audio-cinema materials can overcome barriers to learning, existing even in well-equipped schools, which arise because capable teachers are handicapped by elements beyond their control in bringing to the child more comprehensive learning experiences. It is apparent that distance, for example, prevents the child from meeting realistically the vast number of elements making up world-environment. The sound motion picture knows no geographical or political boundaries. It can bring the world, so to speak, to the individual child and thus furnish him with authentic learning materials, without which the kind and the amount of his learning obviously are limited.[1]

[1] Frederick L. Devereux, *The Educational Talking Picture.* Chicago: University of Chicago Press, 1935 (revised).

Seasonal limitations make up a second barrier to learning. Winter snows, spring rains, summer heat, and the chilling winds of autumn —each may make it impossible for the child to have certain study materials or to engage in selected study activities. The sound film surmounts this difficulty by recording faithfully and reproducing on demand the elements of learning experiences independent of weather restrictions.

Children are slow to learn about a great many things in the world because of the limitations of the unaided human eye. Even with normal vision, many things remain unseen. Space prevents the child from seeing beyond his immediate horizon; density prevents him from peering into solid objects; size will not permit him to gaze into the kingdom of microörganisms; and actions and reactions occur so slowly or so rapidly that he cannot see the processes involved. To provide him with individual apparatus for overcoming these difficulties would require the expenditure of great sums of money. The sound motion picture, with its many technical advantages, not only increases this ability to see but can provide large classes with the same view of a situation at the same instant.

Similarly, the limitations of the child's sense of hearing restricts the type of learning that he can acquire. Most knowledge is in some way associated with sounds; if children can hear the sounds of a situation, their learning is made easier. Not only does the talking picture provide sounds of the ordinary world, but it can make available sounds not usually heard and thus provide additional association cues. Learning is further enriched by incidental sounds. Music or voice inflection, for instance, may be used to advantage in captivating the child's attention and curiosity. As with optical devices, apparatus for reinforcing the individual child's hearing ability can be acquired, but the sound film makes this acquisition unnecessary.

Abstractions related even to primary-grade matter frequently make it difficult for learning to occur. As an example, the story of plant growth is difficult for children to visualize from mere words. It cannot be fully understood from still pictures, but, when the pictures are given life and are interpreted by a carefully prepared and synchronized narration, the story becomes realistic, meaningful, and likely to stimulate the interest and imagination of the young learner.

The restrictions of home and school conditions allow children to come into contact with but a small part of the world in which they live. They cannot travel extensively, inspect scattered industries, see and listen to celebrities, witness natural phenomena, or engage in many other learning activities necessary to obtain the knowledges and the appreciations presented by one ten-minute reel of adequately treated audio-cinema material. The talking picture has the potential power of providing primary-grade children equalized educational opportunity never before realized in the history of education.

Human knowledge is so vast, and ordinary methods of acquiring it are so inefficient, that during the primary-grade years the child learns very little about the sum total. Because of the economies of time and effort effected by the audio-visual instructional film, children coming within its stimulation are enabled to increase the scope of their knowledge tremendously. In addition to acquiring detailed information in specialized concepts, the child may gain information on related concepts, as well as the relation of those concepts to broader areas of thought.

Ordinary methods of presenting primary-grade learning materials have many shortcomings. The presentation may be too involved for the children to grasp; personality defects may not permit the stimulation of attentive thought: speech difficulties may result in misunderstanding; demonstration materials will not be seen by all from the same angle; and written and spoken words have numerous attributes. These and many other inadequacies often result in either laborious learning or misconception. The attention devoted to the preparation of selected sound-film materials, together with the natural appeal of the medium, results in one of the most effective methods of subject-matter presentation that human ingenuity can provide.

The physical requirements of many learning situations do not permit young children to engage in them. Journeys to high mountains, Eskimo life in the polar regions, cherry-blossom time in Japan, visits to native villages in tropical jungles, views of the luxurious vegetation of ocean depths, a glimpse of the world from the stratosphere—these are but a few of the many experiences which through

the sound film young children may enjoy vicariously in the comfort and the security of their classrooms.

The number of learning experiences provided are restricted even in the more fortunately situated schools by the cost and the space requirements of materials and equipment. Nor could such schools provide for the operation, the exhibition, and the maintenance of unlimited instructional facilities. Then, too, laws and other regulations may prevent learning projects from being undertaken. Obviously the sound film can transcend these difficulties and bring to the classroom an array of all kinds of instructional devices. This material can be secured for a relatively small pittance when compared with the tremendous investments in human and material resources involved in the making of the film.

The beginning learner confronts another difficulty in the way subject matter is organized for presentation. Many primary teachers do not have adequate time to devote to this important feature. The scarcity or the abundance of learning materials also makes it difficult even for supervisors to select the elements which are most valuable and which may be arranged into meaningful presentations, complete but not too abstract or too broad in scope for juvenile understanding. The production requirements involved in the preparation of educational sound pictures make it necessary for these difficulties to be overcome at the outset by specialists in the organization of teaching aids. Consequently the teacher is freed from much of the necessity of organizing materials and is permitted to devote her efforts to other needs of the children.

There is a great deal of wisdom in the ancient proverb, "One picture is worth a thousand words." It is probable that one picture will not provide as much confusion in the child's mind as would a thousand words. In addition to words the meanings of which are unknown to the child, there are so many shades of meaning in spoken or written language that verbal chaos easily can come into the learning problem. As an example, consider the question, "Are you reading this article?" Emphasizing each word at a different time in the sentence will give as many meanings as there are words in the sentence. In the professional preparation of instructional sound pictures, vocabulary difficulties are overcome, first, by the

careful selection of words from classified lists and, second, by the association of words with meaningful pictorial action, a proper understanding of the concept involved being thus more nearly assured.[1]

The element of time is a more effective influence in human learning than may appear at first thought. Time determines, to a significant extent, what the child shall learn, how he shall learn it, when he shall learn it, how it will affect his behavior, and how long he will remember what he has learned. At any period of his life he has to learn something about what has happened, what is happening, or what is likely to happen. The sound film can make him appreciate more keenly the significance of what has happened; it can provide him with a vivid interpretation of what is happening; it can suggest realistically what is likely to happen in view of what has happened and what is happening; and it can do these things in a minimum period of time.

The ability of unselected groups of young children to learn varies widely and is a trying problem for even the superior teacher. Experimentation has shown that carefully assembled sound films not only promote learning in general but are particularly effective in conveying ideas to children of subnormal intelligence.[2] In fact, these pupils learn more in proportion to their ability to learn than do the average or the bright pupils. The latter, however, learn much more than they would without the sound film.

The difficulty of motivation frequently manifests itself in classroom situations, and the psychology of learning deals, to a large extent, with the need for motivating the learner's activities. The tools for such stimulation are many and varied, depending on the learning situation involved. In general, however, the matter of interest is important, and in particular instances emotional stimulation may be desirable to make the learning experience more functional. Pupil interests are given every possible consideration in the arrangement of materials in the modern instructional sound film, and, occa-

[1] Leon H. Westfall, *A Study of Verbal Accompaniments to Educational Motion Pictures*. Teachers College Contributions to Education, No. 617. New York: Teachers College, Columbia University, 1934.

[2] Varney C. Arnspiger, *Measuring the Effectiveness of Sound Pictures as Teaching Aids*. Teachers College Contributions to Education, No. 565. New York: Teachers College, Columbia University, 1933.

sionally, harmless emotional elements are introduced to bring about desirable stimulation. The power of the motion picture to stimulate is indicated by experiments with children[1] and by the experiences of theater audiences.

Another barrier to learning guarded against by the sound motion picture is that of misconception. The abundance of learning materials or their complex relationship easily leads to confusion in the child's mind. In the learning process a great deal of time is lost, and untold difficulties develop. In properly assembled instructional sound films there is little opportunity for misconception to occur because of the care exercised in the selection and the arrangement of both auditory and visual elements. The constant appeal of the screen images, together with the happy combination of language symbolism, object visualization, natural and incidental sounds, increases the probability of correct interpretation.

Finally, the reading process itself looms as a barrier to the young child's learning. Inadequate methods and materials, poor habit formation, and mental and physical defects account for most difficulties in beginning reading. Until the child learns to read, he is handicapped in his other learning activities. By means of the advantages previously cited, which are made possible by the wonders of natural speed, ultra-rapid, time-lapse, animated, trick, X-ray, and telescopic photography, and by the use of intrinsic and incidental sounds, together with carefully prepared comments synchronized with attention-commanding devices and the action of the picture, the instructional sound film can provide the young child with learning experiences which are independent of reading ability. This does not mean that children should not be taught to read or that teachers should cease to give attention to reading disability; it means that audio-visual teaching aids should be utilized to enrich the child's supply of general and specific knowledge, which in turn can motivate interest in learning to read, and that these aids should be made an integral part of subsequent reading activities. Because of its universal appeal, the sound motion picture has great promise of becoming a powerful ally of the primary-grade teacher.

[1] Henry James Forman, *Our Movie Made Children*. New York: Macmillan Co., 1933.

NEW AUDIO-VISUAL INSTRUCTION AIDS FOR PRIMARY-GRADE USE

Prior to the last year few, if any, silent or sound motion pictures were prepared specifically for utilization in the lower grades. Some venturesome efforts were made, with varying degrees of success, to show younger pupils films intended for higher age levels, and experimentation has proved that, when properly used, such films contribute substantially to primary-grade learnings.[1] However, a recent project involving the production of sound films especially arranged for primary-grade children opens up a new field for teaching endeavor.

Four subjects, "Animals of the Zoo," "Adventures of Bunny Rabbit," "Farm Animals," and "Poultry on the Farm," produced through the collaboration of Arthur I. Gates and Celeste C. Peardon, of Teachers College, Columbia University; Ernest Horn, of Iowa State University; and Erpi Picture Consultants, New York, have already been released. Additional subjects are in the process of preparation, with the tentative titles of "Farm Crops," "Trains," "The Mail," "Dairy Products," and "The Fire Department." Other subjects, such as "Boats," "Airplanes," "Automobiles," "The Policeman," "Squirrels," "Builders," "Birds," "Teeth," and "Safety" are contemplated for future production. Initial utilization of the films already released has evoked much interest and approval by classroom teachers who have successfully experimented with the materials in several sections of the country.

However, the optimum values of the films will not be fully appreciated until primary-grade teachers give serious study to how such didactic auxiliaries may be used, not for entertainment purposes, but for opening up new horizons for the child as an integral part of reading and other study activities. For this purpose teachers and supervisors will find Brunstetter's book[2] of timely assistance. Brunstetter's findings are based on extensive field studies in which creative teachers utilized selected sound films for a variety of purposes: (1) to introduce a new teaching unit; (2) to convey major

[1] Unpublished research conducted by Laura K. Eads in the schools of Pelham, New York.

[2] M. R. Brunstetter, *How To Use the Educational Sound Film*. Chicago: University of Chicago Press, 1937.

facts or concepts of a unit of instruction; (3) to enrich or extend the content of a unit's work; (4) to provide rapid-survey or background information; (5) to vitalize special projects, such as window gardening; and (6) to use in irregular activities, such as auditorium programs, demonstration lessons, and acquainting community groups with modern teaching materials and methods.

Some idea of the techniques of teaching with the sound film may be secured by considering what the creative teacher can do in the way of adapting the content of any film to the interests, the needs, and the abilities of her class; how she may go about introducing the first, second, or third showing of the films; how the film may be manipulated during the showings to achieve predetermined objectives; and how follow-up activities may be planned, launched, developed, and evaluated.

There need be no fear that the sound film or any other mechanical device will supplant the classroom teacher. In this technological age the sound film should rather be thought of as an opportunity for professionally minded teachers, charged with the educational destinies of boys and girls who will become tomorrow's citizens, to utilize in their daily work the products of science and invention.

THE VOCABULARY AND SPELLING ERRORS OF THIRD-GRADE CHILDREN'S LIFE-LETTERS

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IMPORTANCE OF A CORE VOCABULARY

In language-learning, whether it is in letter-writing, spelling, or composition, a valid core vocabulary is of vital importance. Horn has shown that a relatively few words with their repetitions make up a large part of the running correspondence of adult writing. In fact, the most commonly used 100 words with their repetitions comprise more than 58 per cent of the running correspondence of adults. The most commonly used 1,000 words make up nearly 90 per cent and the most common 2,000 words comprise 95 per cent of the running written correspondence of adults.[1]

Fitzgerald,[2] in his study of fourth-, fifth-, and sixth-grade children's letters written outside the school, showed that the most common 100 words comprised approximately 65 per cent of the running writing of children and that the most commonly used 2,106 words[3] made up approximately 97 per cent of the running writing of the letters studied.

PURPOSE OF THIS STUDY

Because the lists referred to have been helpful in making curriculums, it was thought that a study of the vocabulary and spelling errors of third-grade children would be of additional value. Since the ability to use words without error at an early age would seem to

[1] Ernest Horn, "The Curriculum of the Gifted: Some Principles and an Illustration," *Report of the Society's Committee on the Education of Gifted Children*, p. 87. Twenty-third Yearbook of the National Society for the Study of Education, Part I. Bloomington, Illinois: Public School Publishing Co., 1924.

[2] James A. Fitzgerald, "The Vocabulary, Spelling Errors, and Situations of Fourth, Fifth, and Sixth Grade Children's Letters Written in Life outside the School." Unpublished Doctor's thesis, University of Iowa, 1931.

[3] James A. Fitzgerald, "The Vocabulary of Children's Letters Written in Life outside the School," *Elementary School Journal*, XXXIV (January, 1934), 358–70.

have an important effect on the growth of ability to write, this investigation was made. Accordingly, the purposes of this study were to obtain a valid writing core vocabulary for third-grade children and to indicate the difficulty of that vocabulary.

COLLECTION AND HANDLING OF DATA

Requests were sent to principals and superintendents in many school systems in the Middle West for real letters of third-grade children which had been received through the mail.

Twelve hundred and fifty-six letters were collected. Of these letters, 539 were written by boys and 717 were written by girls in 27 states from New York to California and from North Dakota to Texas. More than a thousand of these letters were written by children living in towns and cities, and fewer than 200 were written by children living on farms.

In the 100,840 running words of the 1,256 letters, 2,928 different words were recorded, and 8,504 spelling errors were tabulated. The 692 words used ten times or more are presented in Table 1, with the frequency of use and the frequency of error in spelling for each word.

FINDINGS AND RESULTS

As was true of adult, high-school, and upper-grade writing, "I" was found to be the word most frequently used by children at the third-grade level. The 100 most common words were used 69,191 times.

This list of 692 words should be of help in making a spelling curriculum. It should be of value in teaching young children to know those words which are most often used in writing and to know how to spell those which are very often misspelled.

TABLE 1

THE 692 WORDS USED 10 TIMES OR MORE IN 1,256 LETTERS WRITTEN BY THIRD-GRADE CHILDREN IN LIFE OUTSIDE THE SCHOOL

Word	Frequency of Use	Number of Times Misspelled	Word	Frequency of Use	Number of Times Misspelled
a	2,482	12	bed	89	3
able	10	1	been	116	18
about	149	6	before	59	14
address	23	5	best	76	4
after	129	9	bet	11	3
afternoon	59	22	better	88	5
again	116	18	big	99	3
age	16	.....	birds	10	1
ago	31	2	birthday	114	24
all	572	16	black	15	1
almost	18	7	bless	158	18
along	143	27	blue	24	2
already	35	13	book	80	4
also	49	4	books	39	6
altar	13	12	both	21	3
always	27	7	bought	29	1
am	1,435	73	boundary	14	1
an	49	3	box	71	3
and	3,087	79	boy	36	1
another	28	8	boys	110	14
answer	76	25	bring	138	9
any	87	9	broke	16	5
anything	24	13	brother	74	10
apples	14	3	brothers	14	2
Apr	18	1	brought	27	4
April	289	29	brown	11	4
are	1,828	16	bunny	13	2
aren't	10	4	busy	22	2
arithmetic	91	26	but	320	12
around	37	2	buy	50	6
as	104	2	by	66	8
ask	46	.....			
asked	18	2	cake	42	1
at	448	7	call	11	.....
aunt	128	13	called	16	1
aunty	14	5	came	48	2
away	41	8	camera	10	5
			can	216	7
baby	78	9	candy	71	5
back	126	7	cannot	11	1
bad	34	.....	can't	54	8
ball	43	2	cap	10	1
baseball	31	13	car	23	.....
basket	28	2	card	64	5
basket ball	29	27	cat	15	1
be	402	2	catechism	23	6
because	183	26	cents	20	3

TABLE 1—*Continued*

Word	Frequency of Use	Number of Times Misspelled	Word	Frequency of Use	Number of Times Misspelled
chickens	20	4	don't	227	66
childhood	15	.....	down	180	12
children	75	10	draw	11	3
Christmas	117	27	drawing	19	6
church	63	11	dress	36	2
class	47	2	dressed	10	2
classmate	19	7	dresses	20	4
clean	10	.....	drill	16	2
close	198	18	during	16	2
closing	12	3			
clothes	17	7	each	30	.....
coasting	11	1	early	30	2
coat	13	.....	Easter	129	19
cold	97	5	easy	13	1
come	482	11	eat	33	.....
comes	24	5	eggs	22	2
coming	110	14	eight	53	3
Communion	76	27	either	11	2
contest	16	1	else	20	8
corn	15	.....	end	16	.....
cough	13	4	enjoy	14	4
could	120	16	enjoyed	15	5
couldn't	19	10	enough	17	6
cousin	143	26	evening	15	2
cows	10	3	ever	15	3
cream	27	11	every	182	42
cute	10	.....	everybody	42	19
			examinations	12	8
dad	28	1	excuse	14	5
daddy	209	21	eyes	12	2
dance	13	.....			
day	247	27	family	23	7
days	51	3	far	11	1
dear	1,326	16	father	114	2
Dec.	33	9	feast	15	1
December	45	4	Feb.	88	35
did	287	6	February	53	13
didn't	66	33	feel	36	7
died	15	1	feeling	123	14
different	10	6	fell	18	.....
dinner	39	5	few	90	5
dishes	22	1	fifth	11	2
do	439	10	find	30	2
doctor	14	7	fine	538	47
does	32	7	finished	19	8
dog	31	2	first	144	22
doing	35	4	fishing	10	1
doll	76	4	five	26	2
dolls	34	.....	flowers	28	7
done	26	7	folks	19	5

TABLE 1—*Continued*

Word	Frequency of Use	Number of Times Misspelled	Word	Frequency of Use	Number of Times Misspelled
fool	14	2	ha	31	1
football	46	31	had	632	14
for	834	32	hair	12	1
forget	39	6	half	43	3
forgot	27	1	Halloween	58	52
found	11	1	hand	15	.....
four	42	6	handkerchiefs	13	8
fourth	73	25	happy	50	3
Friday	65	13	hard	59	7
friend	318	77	hardly	14	2
friends	28	10	has	174	4
from	592	57	have	1,349	39
front	10	1	haven't	36	16
fruit	17	3	having	153	25
fun	170	12	he	231	2
funny	18	2	head	17	1
			hear	83	7
game	119	7	heard	14	1
games	47	7	hello	88	19
garden	17	3	help	37	5
gave	88	1	her	241	4
gee	14	1	here	221	20
geography	23	8	hide	15	3
get	416	9	high	20	1
gets	14	2	hike	16	2
getting	203	46	hill	10	.....
girl	95	5	him	79	5
girls	63	4	his	68	2
give	67	1	history	13	2
glad	159	11	holy	63	2
glass	10	.....	home	298	21
go	586	7	hope	553	30
God	161	11	hoping	28	5
goes	17	5	hospital	11	6
going	731	37	hot	16	.....
gone	19	.....	hour	11	2
good	293	8	house	140	8
good-by	142	115	how	1,067	59
got	557	4	hundred	25	3
grade	379	37	hurry	11	5
grades	12	2			
grandma	86	14	I	6,052	25
grandma's	16	10	ice	41	9
grandmother	26	4	I'd	12	5
grandpa	42	15	if	196	8
green	11	.....	I'll	38	14
ground	11	3	I'm	51	27
guess	75	21	in	1,282	13
gym	13	6	Indian	20	3

TABLE 1—*Continued*

Word	Frequency of Use	Number of Times Misspelled	Word	Frequency of Use	Number of Times Misspelled
ink	11	1	mad	16	.....
into	14	3	made	150	18
is	1,765	13	make	76	5
isn't	22	11	making	49	15
it	1,048	27	mama	66	7
it's	23	16	man	25	3
			many	72	5
Jan	76	22	marbles	27	7
January	47	9	Mar	33	10
July	10	.....	March	148	16
jump	18	2	mark	22	.....
June	42	1	Mass	39	4
just	224	13	may	99	15
			May	138	13
kids	27	3	maybe	33	7
kind	18	1	me	699	12
kinds	11	.....	mean	10	2
kisses	46	6	merry	10	3
know	235	51	might	25	6
			mile	16	1
language	17	4	milk	11	.....
last	177	10	mine	24	1
late	18	1	miss	25	4
learn	18	3	Miss	142	10
learned	10	3	missed	19	1
learning	10	4	Monday	67	5
left	31	3	money	33	7
lesson	36	6	month	40	9
lessons	48	19	months	19	5
let	63	2	more	141	10
letter	476	38	morning	139	33
letters	47	8	most	18	1
like	776	19	mother	634	13
liked	38	5	mother's	20	11
likes	12	2	moved	20	4
lines	51	5	movie	10	1
little	286	10	Mr	27	5
live	35	.....	Mrs	51	21
lonesome	14	8	much	202	16
long	80	6	music	48	4
look	21	3	must	59	5
lost	21	.....	my	1,172	58
lot	107	4	myself	22	14
lots	98	18			
love	342	17	name	217	28
loving	143	21	named	13	5
lovingly	52	12	names	18	1
luck	15	1	near	13	3
lunch	12	1	nearly	13	1

TABLE 1—*Continued*

Word	Frequency of Use	Number of Times Misspelled	Word	Frequency of Use	Number of Times Misspelled
never	29	1	pick	10	.....
new	200	14	picking	12	1
news	15	.....	picnic	50	9
next	109	10	picture	30	9
nice	187	17	pictures	18	4
night	151	17	pie	10	3
nine	38	2	piece	46	18
no	45	4	pieces	16	7
noon	12	1	place	31	4
not	365	14	play	351	13
nothing	17	2	played	61	13
Nov.	52	18	playing	73	5
November	64	9	plays	11	1
now	348	32	please	292	48
			pony	12	3
O	10	1	popcorn	10	3
o'clock	63	50	practicing	15	4
Oct.	51	21	pray	42	4
October	76	13	prayer	25	9
of	879	10	prayers	22	11
off	41	8	praying	18	4
offer	13	3	present	17	1
office	19	2	pretty	88	27
old	205	.....	program	31	4
on	434	9	P.S.	54	10
once	10	1	pupil	31	5
one	281	12	pupils	18	2
ones	11	1	put	53	1
only	48	1			
or	87	4	quite	30	7
other	94	9			
our	473	53	rabbit	18	2
out	438	21	rabbits	14	4
outside	16	12	radio	48	11
over	158	15	rain	19	3
			read	71	3
page	10	.....	reading	77	5
pair	21	.....	ready	11	2
papa	15	1	real	23	2
paper	51	9	received	75	34
papers	13	2	recess	23	7
parents	70	5	red	29	.....
park	18	.....	regards	11	4
party	110	11	remember	13	5
pass	32	5	report	32	7
passed	16	4	rest	14	.....
pen	18	3	ribbon	13	1
pencil	14	4	ride	29	.....
people	21	5	right	82	29
piano	22	8	ring	10	.....

TABLE 1—*Continued*

Word	Frequency of Use	Number of Times Misspelled	Word	Frequency of Use	Number of Times Misspelled
room	95	11	some	345	23
rope	22	3	something	29	12
rosary	10	6	sometime	22	15
run	12	.....	sometimes	40	20
			son	201	18
safe	17	3	song	13	2
said	163	12	soon	240	14
same	83	11	sooner	12	3
sand	12	.....	sorry	50	3
Santa Claus	15	7	spelling	110	7
Saturday	76	19	spring	30	2
saw	38	2	Sr.	18	3
say	193	15	St. (saint)	42	7
says	23	.....	stamps	17	4
school	1,170	78	star	15	2
score	24	3	stars	11	1
second	55	7	start	21	2
see	252	1	started	31	6
seek	14	3	stationery	15	12
seen	18	1	stay	48	2
send	109	20	stayed	13	5
sending	29	5	still	40	.....
sent	53	19	stockings	12	5
Sept.	13	3	stop	12	.....
September	18	5	store	23	1
set	30	1	stories	13	5
seven	14	.....	story	25	.....
she	344	5	study	25	3
shoes	31	6	studying	21	8
should	41	4	such	10	.....
show	161	7	suit	23	5
sick	114	10	summer	75	12
side	13	.....	Sunday	463	69
since	24	4	supper	32	3
sincerely	42	17	suppose	41	16
sing	27	3	supposed	11	7
singing	15	2	sure	135	19
sister	388	16	surely	11	3
sisters	16	6	surprise	13	8
sit	13	.....	swimming	16	4
six	15	.....			
skate	11	1	table	24	3
skates	14	3	tables	11	1
skating	23	7	tag	10	.....
sled	17	2	take	75	8
sleep	16	.....	taking	16	2
snow	78	2	teach	20	.....
snowed	13	2	teacher	197	22
snowing	12	1	teacher's	91	63
so	463	9	teaching	10	1

TABLE 1—*Continued*

Word	Frequency of Use	Number of Times Misspelled	Word	Frequency of Use	Number of Times Misspelled
team	15	6	uncle	53	7
teeth	14	.....	until	28	11
tell	227	12	up	214	3
telling	12	2	us	221	9
ten	36	1	use	15	2
than	29	13	used	14	9
thank	59	10			
thanks	14	.....	vacation	76	24
Thanksgiving	43	16	valentine	67	17
that	502	10	valentines	43	16
that's	24	23	very	347	32
the	2,736	28	visit	34	4
their	60	31			
them	185	10	wait	23	3
then	237	23	waiting	19	3
there	267	34	walk	30	4
these	15	1	want	117	18
they	198	18	wanted	30	2
thing	24	3	wants	18	2
things	45	3	warm	31	4
think	155	7	was	648	15
thinking	13	4	wash	10	2
third	191	18	water	18	.....
this	461	15	way	27	1
thought	52	8	we	2,033	60
three	79	2	wear	21	9
threw	10	6	weather	49	9
through	25	10	Wednesday	26	7
Thursday	30	7	week	142	7
till	22	1	weeks	43	11
time	323	24	well	350	19
times	23	2	went	273	17
tired	13	.....	were	158	12
to	3,497	37	we're	12	7
today	229	71	what	210	12
together	18	8	when	319	31
told	63	2	where	29	5
tomorrow	33	18	which	22	2
tonight	60	12	while	31	2
too	348	158	white	33	5
took	39	.....	who	27	1
town	47	7	whole	13	5
tree	17	.....	why	47	6
trees	12	1	will	1,103	21
truly	91	25	winter	24	1
try	29	2	wish	189	11
trying	12	2	with	489	31
Tuesday	57	7	won	49	7
turkey	14	.....	wonder	10	2
two	173	45	won't	26	13

TABLE 1—*Continued*

Word	Frequency of Use	Number of Times Misspelled	Word	Frequency of Use	Number of Times Misspelled
woods	14	3	year	87	.....
words	19	5	years	158	16
work	85	3	yellow	12	1
working	32	3	yes	24	2
would	194	23	yesterday	110	12
wouldn't	11	1	yet	68	.....
write	495	78	you	3,689	194
writing	139	30	your	1,290	100
wrong	11	1	yours	170	33
wrote	86	15			
			&	26	.....
Xmas	18	8			

INSTITUTIONAL TEACHER PLACEMENT AND SERVICE

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The placement problem is of major importance to a teacher-training institution just as recruitment is a major problem for a superintendent of schools. The only difference between the two problems is the angle from which they are observed. From the superintendent's point of view the problem is to secure the best teacher available for the salary that his school can afford to pay. From the standpoint of the teacher-training institution the problem is to turn out well-prepared candidates from whom the superintendent can recruit his teachers. It is a fundamental fact in vocational training that, before an individual can be prepared for a position, the essential requirements for success in that position must be known.

In the spring of 1936 a questionnaire was mailed to 460 superintendents of schools whose names were listed in the *Michigan Education Directory, 1935–1936*. The purpose of this study was fourfold: (1) to ascertain the attitudes of school superintendents toward the common practices of teacher-training institutions in assisting the candidates to secure positions, (2) to ascertain the attitudes of school superintendents toward the common practices of candidates in seeking positions, (3) to discover what information about applicants is most desired by superintendents, (4) to secure information which might be of value to training institutions in their efforts to improve both the quality of their product and their service to graduates.

The 307 replies are classified in Table 1. All unsigned replies which could not be identified were classified as "unknown." According to the *Michigan Education Directory, 1935–1936*, the superintendents replying to the questionnaire, exclusive of those marked "unknown," have supervision over 10,117 teachers and 352,013 children of school age.

The superintendents wish an applicant to furnish complete infor-

mation about himself in his letter of application. The five items of information most frequently desired in the letter of application, in order of the number of times mentioned, are: (1) teaching experience, (2) academic qualifications, (3) extra-curriculum activities, (4) marital status, and (5) home address.

The four types of references most desired by superintendents, in the order checked, are: (1) previous superintendent, if the applicant has had teaching experience; (2) the critic teacher during apprentice

TABLE 1

REPLIES RECEIVED TO QUESTIONNAIRE FROM 307 SUPERINTENDENTS IN MICHIGAN DISTRIBUTED ACCORDING TO ENROLMENT OF HIGH SCHOOLS IN TOWNS RESPONDING

High-School Enrolment	Number of Replies
1– 99	80
100–199	100
200–299	48
300–499	24
500–999	22
Above 1,000	11
Unknown	22
Total	307

teaching; (3) the professor in the applicant's major subject; and (4) the director of extra-curriculum activities. Only fifty-three superintendents included a minister in their preferred list of references. The following statement is typical of the remarks written on the questionnaire form, "The minister never says anything bad about the person he is recommending."

That religion plays an important part in the selection of candidates is shown by the fact that 219 (71 per cent) of the administrators expressed a wish to have included in the confidential records sent out from the placement office a statement concerning the candidate's religious preference.

The ten most desirable teacher characteristics, in order of preference, are character, academic preparation, ability to maintain discipline, co-operation, professional training, health, honesty, tact, loyalty, and professional interest.

A Bachelor's degree is required by 284, or 97 per cent, of the superintendents answering the question. Eight schools require five years of college training, while only one school will employ high-school teachers with less than four years of college training. College training required for teaching in the elementary school varies from one to four years. Ninety-nine schools require four years, 115 require three years, 68 require two years, and one superintendent will employ elementary-school teachers with only one year of college training.

Some schools make teaching experience a requisite for securing a teaching position. Two years of experience is required by 14 per cent of the schools, while 7 per cent require one year of teaching experience. Inexperienced high-school teachers are employed by 79 per cent of the superintendents. Inexperienced elementary-school teachers are employed in 81 per cent of the schools.

Administrators were asked to check the most desirable extra-curriculum activity training which candidates might present. The five most preferred, in order of preference, are dramatics, athletics, club activities, playground activities, and music.

Information received on certain phases of the questionnaire is shown in Table 2.

A copy of each letter of recommendation, unedited, should be included in the confidential records of the candidate (Items 8 and 10). Superintendents also favor the establishment of a central office in the state, where the records of all teachers looking for positions would be kept available to superintendents at all times (Item 11).

There was difference of opinion about the value of advertising material sent out by placement officers concerning available teacher candidates (Item 12). Seventy-three per cent of the superintendents answering the question believe that a school should advertise its graduates, while 27 per cent think that the practice is not worth while. If advertising material is sent out from placement offices, it should include a summary of the candidate's preparation and qualification. This material, if sent out, should probably reach the superintendent some time in March, since 125 superintendents (54 per cent of those checking a preference) indicated March as the time when such material would be of most use to them.

TABLE 2

DATA ON QUESTIONNAIRE ON TEACHER PLACEMENT SUPPLIED BY 307 SCHOOL SUPERINTENDENTS IN MICHIGAN

Item	Number of Superintendents
1. Do you require a personal interview?	
Yes	284
No	21
2. When personal application is requested, does the school pay any of the candidate's expense if he is not employed?	
Yes	38
No	260
3. Should the candidate personally canvass the field?	
Yes	113
No	156
4. Should candidate send out letters of inquiry?	
Yes	141
No	140
5. Should candidate apply only at superintendent's request?	
Yes	130
No	133
6. Should candidate apply only upon official notification of a vacancy?	
Yes	180
No	88
7. Should candidate apply only when certain a vacancy exists?	
Yes	226
No	45
8. Do you prefer a copy of each letter of recommendation?	
Yes	191
No	69
9. Do you prefer a graph rating of candidate as excellent, good, average, below average, etc.?	
Yes	182
No	45
10. Should letters of recommendation be edited?	
Yes	99
No	135
11. Do you favor a central office for records?	
Yes	222
No	63

TABLE 2—*Continued*

Item	Number of Superintendents
12. Should training school advertise candidates?	
Yes	209
No	79
13. Is home environment of candidate important?	
Yes	210
No	77
14. Do you aim at certain ratio of men and women teachers?	
Yes	218
No	74
15. Do you request teacher participation in community affairs?	
Yes	156
No	144
16. Do you prefer teacher participation in community affairs?	
Yes	284
No	4
17. Do you require health examination of teachers?	
Yes	23
No	274
18. Is health examination of teachers desirable?	
Yes	254
No	20
19. Do you employ an applicant without the recommendation of the training school?	
Yes	80
No	203
20. Prefer letter of application:	
Written in longhand	133
Typewritten	107
21. Prefer confidential record:	
Sent at request of superintendent	269
Sent at request of candidate	75
Accompany letter of application	53
Contain detailed statement of hours, courses, etc.	148
Major and minor courses in detail with remainder of record summarized	118
22. If no candidate available, placement officer should:	
Notify superintendent to that effect	78
Suggest where candidate might be found	186
Pass on information to other institutions	44

TABLE 2—*Continued*

Item	Number of Superintendents
23. Superintendent sends notice of teaching vacancy:	
To a few selected teacher-training schools	280
To Michigan Education Association office	104
To all teacher-training institutions in state	18
To commercial agencies:	
Regularly	15
Occasionally	185
Never	94
24. Quality of scholarship preferred in candidate:	
Superior	59
Above average	219
Average	23
25. Prefer candidate present:	
One major and two minors	150
Two majors and one minor	79
One major and three minors	40
Two majors only	19
26. Prefer teachers remain in community:	
Every week end	13
One-half of week ends	100
Three-fourths of week ends	52
Leave matter to judgment of teacher	120
27. The typical high-school teacher teaches in:	
One subject field	82
Two subject fields	184
Three subject fields	21
28. The typical elementary teacher teaches in:	
One grade or subject field	119
Two grades or subject fields	117
Three or more grades or subject fields	39
29. Superintendent prefers candidates from:	
State teachers' college	153
State university	30
Liberal-arts college	25
No preference	96

Administrators feel that teachers should participate in community activities (Items 15 and 16). While only a little over 50 per cent of the superintendents request participation in community affairs, over 98 per cent of those answering the question prefer that their teachers enter into community activities. The large percentage

of opinion in favor of a health examination for teachers (Items 17 and 18) adds weight to the suggestion that a certificate of health should be required of all teachers and teacher candidates. Although only 23 of the schools require a health examination of teachers,

TABLE 3

SCHOOL POLICY CONCERNING CERTAIN PERSONAL HABITS OF TEACHERS REPORTED BY 307 SUPERINTENDENTS IN MICHIGAN

Habit	Schools Permitting Practice		Schools Tolerating Practice		Schools Forbidding Practice	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Drinking intoxicating liquor:						
Men	4	1.4	35	12.2	247	86.4
Women	2	0.7	32	11.1	253	88.2
Smoking:						
Men	72	25.8	156	55.9	51	18.3
Women	17	6.2	92	33.6	165	60.2
Dancing:						
Men	253	87.5	35	12.1	1	0.4
Women	252	87.2	36	12.5	1	0.4
Playing cards:						
Men	262	90.0	29	10.0	0	0.0
Women	262	90.0	29	10.0	0	0.0
Using profanity:						
Men	3	1.1	40	14.4	234	84.5
Women	3	1.1	26	9.4	248	89.5

254 (83 per cent) of the superintendents feel that it would be a desirable requirement.

A minimum practice-teaching mark of B is required by 71 per cent of the superintendents, and only twenty-three administrators are willing to accept a practice-teaching mark of C. Item 27 in Table 2 shows that the typical high-school teacher teaches in two subject fields, and Item 28 indicates that the typical elementary-school teacher teaches in one grade in 119 schools and in two grades in 117 schools. It is also interesting to note (Item 24) that 71 per cent of

the superintendents prefer a candidate of above-average scholarship to one of average or superior scholarship. Opinion varies (Item 26) about the teacher's remaining in the community over the week end, but there seems to be a feeling among superintendents that this matter should be left to the judgment of the individual teacher.

TABLE 4

PREFERENCES OF 307 SUPERINTENDENTS IN MICHIGAN FOR MEN OR WOMEN TEACHERS

Subject or Grade	Superintendents Preferring Men		Superintendents Preferring Women		Superintendents with No Preference	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
High school:						
English	23	7.5	223	72.6	61	19.9
Language	5	1.6	238	77.5	64	20.9
Mathematics	221	72.0	11	3.6	75	24.4
Science	267	87.0	1	0.3	39	12.7
Social science	170	55.4	39	12.7	98	31.9
Commercial subjects	73	23.8	114	37.1	120	39.1
Elementary school:						
Grades I–IV	1	0.3	268	87.3	38	12.4
Grade V	4	1.3	253	82.4	50	16.3
Grade VI	19	6.2	233	75.9	55	17.9
Grade VII	101	32.9	101	32.9	105	34.2
Grade VIII	124	40.4	74	24.1	109	35.5
Supervisor of elementary grades	31	10.1	93	30.3	183	59.6

Table 3 shows a difference in the standards of conduct for men and women teachers in the case of smoking. Smoking is forbidden to women teachers by 60 per cent of the schools and to men teachers by only 18 per cent of the schools.

The superintendents' preferences for men or women teachers are shown in Table 4. These superintendents greatly prefer men teachers for mathematics, science, and social science in high school, while women teachers are preferred for English and language. Women teachers are preferred for the first six grades in the elementary school.

The large variety of teaching combinations suggested by super-

intendents indicates an administrative weakness. A common standard of teaching combinations would facilitate both the recruitment and the training of teachers. Table 5 shows that some teaching combinations that are hard to fill in some schools are easy combinations to fill in other schools. Superintendents indicate a shortage of

TABLE 5

TEACHING COMBINATIONS WHICH 307 SUPERINTENDENTS IN MICHIGAN REPORTED WERE EASY TO FILL AND HARD TO FILL

Combination	Frequency of Mention
Combinations hard to fill:	
Latin and English	31
Music and art	19
Commercial with any subject	16
Mathematics and foreign language	14
Mathematics and science	10
English and mathematics	9
Elementary and music	8
Science and coaching	8
Manual training and agriculture	7
History and mathematics	7
English and science	7
Latin and music	5
Home economics and language	5
56 other combinations	113
Combinations easy to fill:	
Mathematics and science	77
History and English	70
English and language	58
27 other combinations	49

early elementary-school, music, home-economics, and commercial teachers. An oversupply of social-science and English teachers is indicated.

The suggestions most frequently offered by superintendents on how to improve a training institution's service to its graduates in the field and how to improve the quality of candidates prepared by teacher-training institutions are shown in Table 6. Fourteen suggestions on how to improve an institution's service and twelve suggestions on how to improve the quality of candidates were omitted because each was mentioned by fewer than five superintendents.

TABLE 6

SUGGESTIONS TO TEACHER-TRAINING INSTITUTIONS FROM 307 SUPERINTENDENTS IN MICHIGAN

Suggestion	Frequency of Mention
How to improve institution's service to its graduates:	
Keep in touch with their progress through superintendents' reports	39
Conduct real placement bureau for successful graduates	35
Have supervisor of teacher training visit candidates in the field	15
Have department heads follow up candidates in the field	9
Keep graduates advised of any outstanding developments in the educational field	7
Have a round table at the college for first-year teachers	6
How to improve quality of candidates:	
Have higher standards for admission to professional training	76
Have practice teaching done under normal school conditions	53
Give better professional training	32
Make careful and accurate recommendations	22
Have more practice teaching under better supervision	11
Insist on higher social standards for teachers	11
Insist on participation in some extra-curriculum activities	8
Make courses of instruction more practical	8
Give better training in discipline	6
Introduce modern methods of guidance	5
Develop an apprenticeship method for one year	5

CONCLUSIONS

1. A candidate for a teaching position should apply only when certain that a vacancy exists. The letter of application should be written in longhand and include pertinent facts concerning physical status, academic qualifications, church preference, experience in extra-curriculum activities, teaching experience, present occupation, and home address of the candidate. The candidate should expect to make a personal application at his own expense. He should offer as references the superintendent under whose supervision he has taught, the critic teacher, the college professor in his major subject, the director of college extra-curriculum activities, and a businessman.

2. The confidential record should be sent by the training institution at the request of the superintendent and should include copies of unedited letters of recommendation, a summarized statement of the candidate's academic record, and characteristics of the candidate which may be factors in teaching success. A faculty estimate of the candidate's probable success as a teacher is desirable.

3. The most desirable characteristics of candidates are character, academic preparation, ability to maintain discipline, co-operation, and professional preparation. Academic scholarship should be above the average. Most communities prohibit drinking and the use of profanity by both men and women teachers and smoking by women teachers. Teaching experience is not a requisite for obtaining a position in a majority of the schools.

4. The typical teacher teaches in two grades or subject fields and should expect to participate in community activities.

5. An institution should advertise its candidates, and the information should reach superintendents in March or February. Institutional placement officers should strive for a greater degree of co-operation in their efforts to serve schools.

6. Men are preferred as teachers of science, mathematics, social science, and for Grade VIII. Women are preferred as teachers of language and English and for the first six elementary grades.

7. Institutions should raise the standards for admission to professional training. Practice teaching should be done under normal teaching conditions. Institutions should keep in touch with their graduates and assist them in achieving success as teachers.

8. These superintendents use regularly the institutional placement offices, the Michigan Education Association placement bureau, and commercial agencies. They would prefer, however, the establishment of a central office in the state where records of all unemployed teachers may be kept available to superintendents.

9. There is need for better administration of the curriculum in order that the teaching combinations may be reduced in number and complexity.

10. Superintendents are in favor of requiring a health examination of all teaching candidates.

SELECTED REFERENCES ON PRESCHOOL AND PARENTAL EDUCATION

FLORENCE L. GOODENOUGH
University of Minnesota

This bibliography covers the period from December 1, 1936, to December 1, 1937. The plan of selection is the same as that used in previous years.

Technical and Experimental Studies

105. Ackerley, Lois A., Ojemann, Ralph H., Neil, Berniece, and Grant, Eva. "A Study of the Transferable Elements in Interviews with Parents," *Journal of Experimental Education*, V (December, 1936), 137–74.

The first study, "A Comparison of Attitude Scales and the Interview Method" (by Ackerley), shows that well-standardized attitude scales can be substituted for certain parts of the interview with parents without loss of accuracy and with a saving of time. The second, "Parents' Practices and Appraisal of Child's Growth" (by Ojemann and Neil), shows that questionnaires filled out by parents agree closely with data obtained on a standardized interview when only concrete items, such as eating and toilet items, are considered but that items dealing with social and emotional development often show divergence when the two sources are compared. The third study, "Integration of Behavior Factors and Emotional Control" (by Ojemann and Grant), is an experimental investigation of the Luria techniques as a means of detecting basic conflicts in parents and disturbances of the parent-child relationship. These studies suggest a number of methods that may improve or supplant the interview in parent education.

106. Ames, Louise Bates. *The Sequential Patterning of Prone Progression in the Human Infant.* Genetic Psychology Monographs, Vol. XIX, No. 4. Worcester, Massachusetts: Clark University Press, 1937. Pp. 409–60.

Prone progression develops by means of a cephalocaudal sequence, the use of the arms preceding that of the legs.

107. Anderson, Harold H. *Domination and Integration in the Social Behavior of Young Children in an Experimental Play Situation.* Genetic Psychology Monographs, Vol. XIX, No. 3. Worcester, Massachusetts: Clark University Press, 1937. Pp. 341–408.

An elaborate study of the interactions of Iowa City nursery-school children showed them to be less inclined to dominate by force and more ready to play co-operatively than were orphanage children of the same age.

108. AYER, MARY ELLEN and BERNREUTER, ROBERT G. "A Study of the Relationship between Discipline and Personality Traits in Little Children," *Pedagogical Seminary and Journal of Genetic Psychology*, L (March, 1937), 165–70.

A definite relation was found between personality traits of nursery-school children and the methods of discipline used in the home, as reported by parents.

109. BLATZ, W. E. and ASSOCIATES. *Collected Studies on the Dionne Quintuplets*. Toronto, Canada: University of Toronto Press, 1937. Pp. 300.

A series of six studies dealing with the following topics: biological evidence of genetic identity, mental growth, social development, development of self-discipline, training in routine habits (sleeping, eating, toilet, etc.), and development of spoken language. Many illustrations are included.

110. CHASE, W. P. "Color Vision in Infants," *Journal of Experimental Psychology*, XX (March, 1937), 203–22.

By means of a projection apparatus and colored filters of known wave-lengths, an effect of one color moving within the field of another color of equal brightness was produced. It was found that infants as young as fifteen days responded to the moving spot of color by ocular pursuit.

111. COFFEY, HUBERT S., and WELLMAN, BETH L. "The Role of Cultural Status in Intelligence Changes of Preschool Children," *Journal of Experimental Education*, V (December, 1936), 191–202.

Changes in intelligence quotient after attendance at nursery school are negatively related to intelligence quotient at entrance but are unrelated to occupation or education of parents.

112. CRISSEY, ORLO L. *Mental Development as Related to Institutional Residence and Educational Achievement*. University of Iowa Studies in Child Welfare, Vol. XIII, No. 1. Iowa City, Iowa: University of Iowa, 1937. Pp. 82.

With increasing length of institutional residence, a progressive tendency for children to approximate the typical level of their group was noted. Children originally scoring above the average of the group in which they were placed tended to lose; those below it to gain.

113. CRUDDEN, C. H. "Reactions of Newborn Infants to Thermal Stimuli under Constant Tactual Conditions," *Journal of Experimental Psychology*, XX (April, 1937), 350–70.

Nonlocalized (generalized) responses to thermal stimulation were, on the whole, of greater magnitude than localized responses. Both in number and magnitude, responses tended to be greater when the stimulus consisted in a change from the normal skin temperature (33° to 34° C.) to a higher or a lower point than when the change was from a point above or below normal back to the neutral value.

114. FALES, EVALINE. "A Rating Scale of the Vigorousness of Play Activities of Preschool Children," *Child Development*, VIII (March, 1937), 15–46.

The scale, which is based on direct observation of children's play activities, is given in full, together with directions for use and a statistical evaluation of results.

115. FALES, EVALINE. "A Comparison of the Vigorousness of Play Activities of Preschool Boys and Girls," *Child Development*, VIII (June, 1937), 144–58.

No sex differences were apparent in the group studied.

116. GESELL, ARNOLD and ILG, FRANCES L. *Feeding Behavior of Infants.* Philadelphia: J. B. Lippincott Co., 1937. Pp. 210.

An account, illustrated by many photographs, of developmental progress in feeding from the neonatal period to the age of three years.

117. GIESECKE, MINNIE. *The Genesis of Hand Preference.* Monographs of the Society for Research in Child Development, Vol. I, No. 5, Serial No. 5. Washington: National Research Council, 1936. Pp. viii+102.

An intensive study of the development of lateral dominance in seventeen infants from birth to seventeen months of age. Some degree of differential hand preference is shown from birth, but the number of cases of apparent sinistrality is greater among infants than among older children.

118. HARMON, CATHERINE. "Racial Differences in Reaction Time at the Preschool Level," *Child Development*, VIII (September, 1937), 279–81.

Italian children seemed to show a more mature type of reaction, age for age, than other groups. The rank order for the six groups studied was as follows: Italians, negroes, American whites, Jews, Mexicans, American Indians.

119. HATTWICK, BERTA WEISS. "The Influence of Nursery School Attendance upon the Behavior and Personality of the Preschool Child," *Journal of Experimental Education*, V (December, 1936), 180–90.

Attendance at a nursery school seems to improve social adjustment, decrease behavior indicative of inhibitions, and improve routine habits in preschool children.

120. HILDRETH, GERTRUDE H. "Color and Picture Choices of Young Children," *Pedagogical Seminary and Journal of Genetic Psychology*, XLIX (December, 1936), 427–35.

One hundred and thirty-eight children between the ages of three and six years and of superior intelligence were given a series of tests to determine preferences for certain colors and pictures. Of the colors used, orange was first choice, pink second, and red third. Pictures portraying action and including animals were preferred above other types.

121. HILDRETH, GERTRUDE H. "Developmental Sequences in Name Writing," *Child Development*, VII (December, 1936), 291–303.

It is stated that the ability of children to write their own names shows steady improvement between the ages of three and six years without any formal instruction in writing and that exceptional maturity or immaturity in name-writing is a significant developmental sign. Typical samples for each age level are presented.

122. KANTROW, RUTH WILDENBERG. *Studies in Infant Behavior: IV. An Investigation of Conditioned Feeding Responses and Concomitant Adaptive Behavior in Young Infants.* University of Iowa Studies in Child Welfare, Vol. XIII, No. 3. Iowa City, Iowa: University of Iowa, 1937. Pp. 64.

Sixteen infants under four months of age were conditioned to react to the sound of a buzzer. Experimental extinction was later introduced. Both in the establishment of the conditioned reaction and during its extinction, the infants displayed a capacity to utilize significant signals and to discard false leads that has generally been thought to be limited to the adaptive behavior of older persons. The importance of organic state as a determinant of "conditioning readiness" is stressed.

123. KEISTER, MARY E. and UPDEGRAFF, RUTH. "A Study of Children's Reactions to Failure and an Experimental Attempt To Modify Them," *Child Development*, VIII (September, 1937), 241–48.

By means of a training period in which children were allowed to experience success through persisting effort at a graded series of tasks, marked improvement in reactions to difficulty was brought about.

124. LEVY, DAVID M. "Thumb or Fingersucking from the Psychiatric Angle," *Child Development*, VIII (March, 1937), 99–101.

Concludes that many cases of thumb-sucking are the result of insufficient satisfaction of the sucking instinct during infancy. Recommends a return to the use of properly sterilized infant pacifiers as a means of satisfying the suckling drive.

125. LEWIS, SAMUEL J. "The Effect of Thumb and Finger Sucking on the Primary Teeth and Dental Arches," *Child Development*, VIII (March, 1937), 93–98.

A longitudinal study of children in the Merrill-Palmer nursery school shows a clear relation between thumb-sucking and certain types of malformation of the dental arches. Suggestions for treatment are given.

126. MCCLURE, SUE COOK. "The Effect of Varying Verbal Instructions on the Motor Responses of Preschool Children," *Child Development*, VII (December, 1936), 276–90.

While it is in general true that encouragment is more effective than discouragement and emphasis on success more effective than emphasis on failure, this experiment shows that many other factors are also involved in the successful management of children.

127. MARSHALL, EVERETT L. "A Multiple Factor Study of Eighteen Anthropometric Measurements of Iowa City Boys Aged Nine Days to Six Years," *Journal of Experimental Education*, V (December, 1936), 212–28.

A multiple-factor analysis by the Thurstone method of physical measurements of 850 white boys divided into nine age groups. From three to four factors were revealed at each age. Of these, the first was tentatively identified as a "fat factor," and the remaining three were not named.

128. MAST, ELISABETH T. "Motivating Factors in Child Learning," *Child Development*, VIII (September, 1937), 273–78.

A reward following the successful opening of a puzzle box seemed to have a greater motivating effect than an unpleasant sound that continued until the box had been opened.

129. MELCHER, RUTH T. "Development within the First Two Years of Infants Prematurely Born," *Child Development*, VIII (March, 1937), 1–14.

A total of forty-two prematurely born infants were given periodic examinations by means of the Bühler-Hetzer scale. While the results showed a temporary lag in mental development, most of the infants had caught up to the average by the age of five months.

130. MURPHY, LOIS BARCLAY. *Social Behavior and Child Personality*. New York: Columbia University Press, 1937. Pp. viii+344.

A detailed account of the responses of young children to manifestations of distress by their playmates.

131. NEWHALL, SIDNEY N. "Identification by Young Children of Differently Oriented Visual Forms," *Child Development*, VIII (March, 1937), 105–11.

Sixteen children between the ages of three and five years appeared to identify geometrical figures about as readily in reversed as in normal orientation.

132. OLSON, WILLARD C., and KOETZLE, VIOLA SCHUBART. "Amount and Rate of Talking of Young Children," *Journal of Experimental Education*, V (December, 1936), 175–79.

The data indicate that children of nursery-school and kindergarten age have an average verbal output of about 16.5 words per minute at a rate of 186 words per minute while speaking. A time-sampling method with mechanical aids was used.

133. PECK, LEIGH, and HODGES, AMELIA B. "A Study of Racial Differences in Eidetic Imagery of Preschool Children," *Pedagogical Seminary and Journal of Genetic Psychology*, LI (September, 1937), 141–61.

A total of 208 white children, 50 Mexican children, and 50 negro children, all between the ages of three and six years, were tested for eidetic imagery. The negro children were found to lead the other two groups both in the percentage of children reporting eidetic images and in the richness and the detail of their descriptions. For all three groups the percentages of *eidetikers* were greater at ages four and five than at ages three or six years.

134. PORTENIER, LILLIAN G. "Factors Influencing the Social Adjustment of Children of Preschool Age," *Pedagogical Seminary and Journal of Genetic Psychology*, LI (September, 1937), 127–39.

Single factors in the environment are of relatively small significance in determining behavior. It is the total constellation of conditions that counts.

135. PRATT, KARL C. "The Organization of Behavior in the Newborn Infant," *Psychological Review*, XLIV (November, 1937), 470–90.

A discussion of neonatal behavior, in which the gradual progression from generalized to specific responses and the factors affecting the degree of generalization are pointed out.

136. SKEELS, HAROLD M. "A Co-operative Orphanage Research," *Journal of Educational Research*, XXX (February, 1937), 437–44.

Orphanage children who attended a nursery school for a period of nine months showed measurably greater improvement in social maturity than did a control group from the same orphanage who received no special training.

137. SMITH, ENID S. "Teaching the Preschool Child To Reason," *Child Development*, VIII (June, 1937), 191–93.

By pointing out relations of cause and effect, teachers and parents can do much to help the young child form logical generalizations.

138. VAN ALSTYNE, DOROTHY, and OSBORNE, EMILY. *Rhythmic Responses of Negro and White Children Two to Six, with a Special Focus on Regulated and Free Rhythm Situations.* Monographs of the Society for Research in Child Development, Vol. II, No. 4, Serial No. 11. Washington: National Research Council, 1937. Pp. iv+64.

In the ability to keep time to music, negro children exceed white children of the as me age, especially on rhythms that are comparatively simple.

139. WILLIAMS, HAROLD M., MCFARLAND, MARY L., and LITTLE, MARGUERITE F. *Development of Language and Vocabulary in Young Children.* University of Iowa Studies in Child Welfare, Vol. XIII, No. 2. Iowa City, Iowa: University of Iowa, 1937. Pp. 94.

Part I of this study describes a method for eliciting and scoring the speech of young children. Part II describes a method for analyzing and scoring erroneous speech sounds. Part III describes a shorter and more objective form of the Smith Vocabulary Test, a complete copy of which, together with instructions for administration and scoring, is given in Appendix A. Part IV describes a method for testing speech sounds, intelligibility and organization by means of a controlled experimental setup. A manual of instructions for this test is presented in Appendix B.

NONTECHNICAL BOOKS AND ARTICLES PRIMARILY FOR PARENTS, TEACHERS, AND WORKERS IN THE FIELD OF PARENT EDUCATION[1]

140. ANDERSON, HAROLD H. *Children in the Family.* New York: D. Appleton-Century Co., Inc., 1937. Pp. xii+254.

[1] See also Item 182 (Andrus and Associates) in the list of selected references appearing in the April, 1937, number of the *Elementary School Journal.*

A guide to the training of children during the preschool years. Helpful for parents and nursery-school teachers.

141. BEER, ETHEL S. "The Day Nursery as a Laboratory," *Journal of Juvenile Research*, XXI (April, 1937), 83–90.

A plea for more scientific studies of children in day nurseries.

142. CARROLL, ELEANOR GALE COLES. "Managing Two at Once," *Parents' Magazine*, XII (October, 1937), 26–27, 94–96.

A mother of two children tells how she organizes her day.

143. DURSTON, HARRIET. "When Bedtime Means a Battle," *Parents' Magazine*, XII (January, 1937), 21, 58.

Discusses a number of possible reasons for a child's dislike of bedtime, with suggestions for handling them.

144. FRIES, MARGARET E. "The Value of a Play Group in a Child-Development Study," *Mental Hygiene*, XXI (January, 1937), 106–16.

Describes the use of an organized play group for young children as a means for securing direct observations of child behavior that will serve as a basis for treatment and for advice to parents.

145. ORGEL, SAMUEL Z. "Bringing Up Children: Their Healthy Emotional and Volitional Development," *Mental Hygiene*, XXI (July, 1937), 436–51.

The development of a feeling of security through assurance of family affection during the preschool years is essential for healthy adjustment then and later.

146. SHEARSTON, ALICE D. "If a Child Is Jealous," *Parents' Magazine*, XII (December, 1937), 21, 82.

Twelve possible reasons for jealousy in young children.

147. VON BERGE, EDNA E. "Apartment-House Preschools—The Swedish Way," *Childhood Education*, XIV (September, 1937), 14–16.

A brief account of the nursery schools established in low-rate apartment houses by the Better Housing Society of Sweden.

148. WEXBERG, ERWIN, and FRITSCH, HENRY E. *Our Children in a Changing World*. New York: Macmillan Co., 1937. Pp. xii+232.

A book for parents and teachers which stresses the need to allow the child to develop courage, initiative, and a feeling of social responsibility.

Educational Writings

REVIEWS AND BOOK NOTES

Evaluating the superintendency.—The problems of educational leadership are constantly under discussion. Recent months have seen the publication of a number of books in the field of supervision. Some of these are excellent contributions, but of others it may be said, "Just another book on supervision." All these publications undoubtedly are designed to voice the theories and the findings of the authors in attempts to compose the constantly arising differences of opinion concerning the functions of the supervisor in the present educational program and the much-discussed relations between classroom teachers and administrative officers. *The Beginning Superintendent,*[1] in a compass of about six hundred pages divided into twenty chapters, attempts, with success, to cover the range of problems to be found in the fields of educational administration and the educational leadership provided through the supervision of instruction.

Readers should not assume, from the title of the book, that it was written for beginning superintendents only. The veteran in the field of supervision will find the discussions worthy of careful reading. There are helpful suggestions for any serious school administrator who, in order to determine his efficiency, has formed the habit of checking his own work.

The feature that will first appeal to the reader of this book is its logical organization. Certain chapters deal with the administrative functions of the superintendent. Other chapters discuss the specific problems to be found in supervision for the improvement of classroom work. The first chapter, "Education in a Democracy," lays the foundation for a consideration of the philosophy of educational leadership on a co-operative basis. The newer conception of the democratic ideals in education has been defined. For the guidance of persons responsible for curriculum-planning, there is an interpretation of the demands for an educational program designed to provide training for the appreciation of moral and civic responsibilities as a basis for citizenship. Students and practitioners in the field of administration will read with interest the chapters dealing with such timely subjects in public-school administration as "Efficient Office Management," "The School Board," "Financial Problems," "The School

[1] Frederick Elmer Bolton, Thomas Raymond Cole, and John Hunnicut Jessup, *The Beginning Superintendent.* New York: Macmillan Co., 1937. Pp. xxxiv+614. $4.00.

Plant," and "Keeping the Public Informed." Several chapters deal with supervisory functions. The field covered begins with the selection of teachers and the types of in-service training required to maintain and to improve the personnel and is extended to include discussions on guidance, child accounting, and the general principles controlling the grading and the promotion of pupils. The chapters on the use of textbooks and on the organization and use of school libraries are rich in constructive suggestions.

A feature worthy of note, one that is frequently overlooked, is the documentation. Bibliographies and references are complete and accurate. The authors have had the courage to go beyond the deadline of the five-year copyright limit which is one of the recent educational idiosyncrasies. Many references from educational periodical literature have been listed, a field thus being made available which is rich in original case reports from the pens of successful educational practitioners.

The Beginning Superintendent will be read with interest and profit by all students of educational leadership. Members of school boards will find in it standards for the development of educational policies. Classroom teachers will read it to gain an improved conception of the functions and the problems of supervision as they relate to the modern school.

The format of the book is attractive. It is to be regretted that the publishers were unable to set a lower price for the book and thus make ownership possible for a wider field of readers.

WILLIAM J. HAMILTON

SUPERINTENDENT OF SCHOOLS
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Educative experiences outside the traditional curriculum in the elementary school.—In progressive schools, both at the elementary and the secondary level, pupils have always engaged in many kinds of experiences which were different and apart from the traditional curriculum. The line of demarcation between the curriculum and the extra-curriculum has not been so patent in the elementary school as in the higher school. Most of the literature on the extra-curriculum, for this reason, has been concerned with the high school.

In recent years, however, this aspect of the life of the lower schools has been given more of the consideration which it deserves by school leaders desirous of recognizing the true educational worth of any and every type of pupil experience. The latest attempt in that direction is an extensive description[1] of practices as they were found in forty elementary schools in thirty-one cities in thirteen eastern, middle western, and western states.

Three unusually elaborate questionnaires were sent to each of the cooperating schools, including a twenty-four-page form to the principal, a second form of eleven pages to each teacher, and a third form of three pages to the

[1] Henry J. Otto and Shirley A. Hamrin, *Co-curricular Activities in Elementary Schools*. New York: D. Appleton-Century Co., Inc., 1937. Pp. xiv+442. $2.75.

sponsor of each organization. From the answers on these forms were taken nearly all the practices which are described as well as the large amount of illustrative material—the elements of which the book is chiefly comprised.

The scope of activities included is somewhat broader than that of the usual treatment, the term "co-curricular activities" being defined as "those school-sponsored child activities which require administrative provision and organizational involvements somewhat different from the more typical classroom activities" (p. 9). Two of the thirteen chapters, in keeping with this definition, deal with "Trips and Excursions" and "Pupil Participation in Messenger, Building Control, and Safety Services," while parts of other chapters are concerned with such subtopics as "Individual Music Lessons," "Supervision of Play Periods," and "Pupil Responsibility for Routine Activities within the Classroom."

Nine of the remaining chapters are devoted to activities more customarily associated with the extra-curriculum, such as assemblies, publications, social and music activities, clubs, athletics, participation in classroom management, councils, and extra-school organizations. The first and the last chapters are largely of a theoretical nature. An appendix reproduces the three questionnaires used to collect the data.

The book is full of useful suggestions to principals and teachers who recognize the value of vigorous participation on the part of children in social activities and services which they consider important. Educators who are skeptical of the significance of such participation may have their eyes opened. College teachers of classes in extra-curriculum activities and in elementary education will find this volume well worth their consideration.

PAUL W. TERRY

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A new and long-range approach to curriculum-making.—Part XIII of the Report of the Commission on the Social Studies of the American Historical Association is offered to teachers, administrators, and curriculum-makers as a new theory in, and a new approach to, curriculum-making in the social studies.[1]

The distinct contribution of this volume is the "social-process" approach as distinguished from "courses in specialized disciplines," fusion social-science courses, "courses in problems of the day," "institutional" approaches, and others. Their approach is set forth by the authors as "a needed next step" in curriculum-building and in the organization of instruction.

The authors consider the aim and the task of the social studies in the schools to be threefold: "to aid the youth to the fullest practicable understanding of our social order; to a meaningful realization of the ways in which the individual,

[1] Leon C. Marshall and Rachel Marshall Goetz, *Curriculum-making in the Social Studies: A Social Process Approach.* Report of the Commission on the Social Studies of the American Historical Association, Part XIII. New York: Charles Scribner's Sons, 1936. Pp. xviii+252. $1.75.

both pupil and adult, may participate effectively in that order; and to motivation for effective participation" (p. 2). The authors claim that the good features of each of the previous and current approaches "may be fitted" into this "larger synthesis."

Of the eleven chapters in the book, the first deals with the "social-process" approach and with the "fundamental social processes" of society and civilization. These processes (admittedly opportunistic in classification) are listed as follows: (*a*) "The Process of Adjustment with the External Physical World," (*b*) "The Process of Biological Continuance and Conservation," (*c*) "The Process of Guiding Human Motivation and Aspiration," (*d*) "The Process of Developing and Operating the Agencies of Social Organization," (*e*) "The Process of Securing and Directing Cultural Continuance and Cultural Change," and (*f*) "The Process of Personality Molding."

The advantages of this approach are said to be: (1) that it is "an aid to the development of meaning," (2) that it utilizes the "experiential background," (3) that it provides "a needed overview," (4) that it provides "standards for curriculum-making," and (5) that it forms a dependable basis for social engineering.

The "Underlying Features of the Human Scene" (chapter ii), as a basis for the "social-process" treatment, are given as (1) biological powers and capacities (conditioning social structure), (2) human living as group living, and (3) physical environment (conditioning socio-cultural living).

The remaining chapters of the volume deal successively with the social processes enumerated above.

Samples of basic generalizations as implications for the rule of instruction in the social studies are: (1) Men came to live in groups, partly at least, because groups have survival value flowing from the advantages of mass action and from the advantages of specialization. (2) As all hope for future improvement of society lies in cultural change, the oncoming generations must learn to control cultural change. (3) A social-studies curriculum which does not deal constructively with the fact that culture has conferred on man powers to control nature "bungles its obligation to prepare youth for effective participation in an evolving culture" (p. 65). (4) The task of the social studies is not only to describe man's "tremendous ability to reach a flexible adjustment with the physical world" but also "to point out how lamentably short of his opportunities have been man's achievements, how portentous a future impends, and how essential it is to exercise control of development of culture" (p. 84).

There is nothing new in these and other such generalizations and "principles" of social living, but they serve to indicate, to a limited degree, the frame of reference into which the "social-process" approach and methods are to be fitted. The chief difficulty here, however, as in many other "foundations" for curriculum-making is that no concrete materials are offered—no units of learning, no detailed content and organization—to show exactly how this "social-process" method is to be clothed with flesh and blood in the classroom and in the daily

process of teaching and learning. Consequently the book is not one from which the average teacher in service will derive great benefit.

Moreover, to state, as the authors do, that school administrators will know how to adapt this "social-process" scheme to the classroom situation is merely (as all of us who have had part in the construction and supervision of curriculum-revision programs well know) to beg the question. The average school administrator, teacher, and situation at present will not and cannot provide the background and appropriate details of organization, content, and procedure to accomplish such an adaptation. Expert guidance and down-to-earth co-operation from the theorists and the curriculum experts are essential, with main emphasis on *down-to-earth co-operation.*

Other weaknesses of the volume are evident from its very first pages. Among these is the fact that the title of the book is a misnomer. It is not a treatise on "curriculum-making in the social studies" but merely a theory for, and an approach to, curriculum-making. Again, parts of the volume with their suggestions are simple enough for comprehension by, and adaptation to, the average junior or senior high school pupil while other parts are a real challenge to the ability and the versatility of the most advanced teachers in the schools. To assume that what has been worked out in the best experimental schools can with equal ingenuity be adapted and worked out in the vast majority of the schools of the country at present, particularly those most in need of curriculum revision, is to assume entirely too much. In other words, the book includes too much theory and not enough practical suggestions for an effective curriculum-revision program.

In spite of these weaknesses, *Curriculum-making in the Social Studies* is a timely volume. In the "social-process" approach the authors challenge educational philosophers, psychologists, curriculum experts, and progressive teachers and administrators everywhere to reconsider the bases on which they are developing curriculum programs and in some manner to realize more fundamentally the importance of the great social processes as organizing centers around which a practical and functional curriculum for a democratic social order may be built. Evidence of the influence of this volume is being seen already in such programs as the new scope and sequence setup in the curriculum-revision program of the state of Virginia.

R. E. SWINDLER

UNIVERSITY OF VIRGINIA

Historical overview of experimentation in reading.—The reviewer has examined with a great deal of interest a recent publication in the field of reading.[1] The publication opens with the presentation of photographs of outstanding re-

[1] Earl A. Taylor, *Controlled Reading: A Correlation of Diagnostic, Teaching and Corrective Techniques.* Chicago: University of Chicago Press, 1937. Pp. xxviii+368. $3.50.

search workers in the field together with a selected bibliography of the contributions of each worker.

This unique introduction is followed by a historical sketch of objective methods of recording eye-movements. Pictures and diagrams of eye-movement cameras from the earliest to the latest models are inserted at appropriate points in the discussion. Descriptions and illustrations of reading graphs made by these cameras are also presented. The importance of the reading graph may be stated in the words of the author:

> The reading graph not only makes possible the study of binocular co-ordination, but also indicates the number of fixations and regressions, and the reading time. From these data it is possible to compute the reading speed, the span of recognition—which is the most important factor in rapid reading, and the reaction time—that is, the time required to fixate and perceive and comprehend the meaning of the printed symbol [p. 125].

A table of eye-movement norms and averages is given in terms of fixations, regressions, and number of words read per minute for Grades I–VII and for high school and college. The table of norms is supplemented by binocular reading graphs that show the change in the eye habits of the average pupil as he advances academically.

The metronoscope or triple-shuttered tachistoscope, an instrument devised to present reading material in such a manner as to control the reader's eyes in rhythmical left-to-right movements and to condition accurately all return sweeps, is described in Part III. The material in each opening of the instrument is obscured as soon as it has been read. Thus regressive movements are discouraged.

The results of experimental studies relating to controlled reading are presented in Part IV. The factors investigated include physiological defects and eye discomfort among school children, visual inefficiencies as related to failure in mathematics, behavior of the eyes when reading from the metronoscope, diagnosis and correction of reading deficiencies in high school, duction and fusional training in reading, and prism reading with the metronoscope. The discussion ends with a well-organized chapter of trends and conclusions.

On the whole the book is well organized. Its wealth of illustrations and a carefully selected bibliography should make it an excellent reference book for teachers and research workers in education and psychology. Another feature worthy of mention is the introduction of the binocular reading graph. Hitherto most of the experiments on eye-movements have included graphs of one eye only, on the assumption that both eyes move in the same manner. Experiments presented in this book show that this assumption is not necessarily correct. The binocular graphs indicate certain fusional conflicts which may result in inaccurate perception and, in turn, influence reading ability.

W. H. Gray

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Life and color in supplementary readers.—To the writing of supplementary reading materials for little children there seems to be no end. This is as it should be. Only through the preparation of new materials can the results of our better understanding of needs and the means for meeting them be incorporated in suitable books for the benefit of boys and girls. To this end a trio of competent authors have pooled their gifts and efforts in producing three useful and attractive volumes.[1]

These colorful volumes are gauged at primer, first-grade, and second-grade levels. The pupil passes progressively from a meeting of Nick and Dick through "Fun with" these interesting lads to "The Story Book" designed for them.

Care in the mechanical makeup of the books and in the nature and the extent of the vocabularies reflects the interests of the senior author. Lest it be assumed that the mechanics are dominant, we hasten to assure the interested reader that the literary sensitivity of a Franklin T. Baker has played a part in the selection of the materials. Not a few of the materials carry the approving stamp of previous copyrights, which are duly acknowledged.

In working through these interesting little volumes, one gets the impression that they have passed the censorship of the classroom teacher who must daily do something for, to, or about some thirty to forty children. Perhaps this characteristic is the best part of the contribution, but one should not overlook the illustrations. Those of the first two volumes are particularly intriguing.

The interests of Nick and Dick are well sustained throughout the series. After following the boys through three volumes, one can hardly escape a certain curiosity concerning the dominance of the fortunes of these two young members of the sterner sex. Is this dominance, by chance, a subtle social backfire against feminine ascendancy?

The reviewer can only say that the stories are worthy and doubtless will catch and hold the interest of little girls as well as that of little boys. Should the authors suffer a deluge of criticisms from the neglected girls, let them write a trio of equal merit about Shirley and Sally.

CLYDE B. MOORE

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Simple stories based on children's interests.—Children and teachers who have enjoyed the first Picture Scripts will be glad to know about five new books.[2]

[1] Arthur I. Gates, Franklin T. Baker, and Celeste Comegys Peardon, The Good-Companion Books: *Nick and Dick*, pp. vi+138, $0.56; *Fun with Nick and Dick*, pp. viii+168, $0.64; *The Story Book of Nick and Dick*, pp. x+246, $0.80. New York: Macmillan Co., 1936 and 1937.

[2] Picture Scripts. (*a*) *How To Make Marionettes for Fun at Home, Plays at Schools and Clubs, and Professional Performances* by Edith Flack Ackley, pp. 24; (*b*) *Matilda, the Old-fashioned Hen* by Elizabeth Matson, pp. 48; (*c*) *Airplanes: The Work They Do and How They Do It*, pp. 24; (*d*) *Along the Busy River* by Katharine Keelor; (*e*) *The Picnic* by James S. Tippett, pp. 48. New York: Grosset & Dunlap, Inc., 1936.

All are as attractively illustrated and printed as were the first, and all are as worth while in content.

Many children who are old enough, and some adults, like to make marionettes. One of the new Picture Scripts tells just how to do it. There are chapters on "What To Do with Marionettes," making marionettes, "Backgrounds and Stage Properties," "Arranging a Program," and "Suggestions for a Play." Everything is told in such simple language and with so many illustrations that any child who is old enough to make a marionette can read the directions for doing it.

The younger children will enjoy the lively, funny story of a setting hen, a proud rooster, and their twelve downy chicks, and, incidentally, they will learn how long it takes to hatch chicks, what an incubator is, and what great patience the mother hen possesses.

Boys, young and old, are constantly asking for books about airplanes. The new Picture Script on this subject is easy to read from Grade III on, and younger children will like to hear the story and study the pictures. Exactly the kind of authentic material that is needed is provided in the pictures and discussions of a cross-section of an airplane, boarding the plane, the cockpit, how the mechanics help, refueling the plane, etc.

Boats and bridges are equally as interesting as airplanes to present-day, motor-minded children. From kindergarten on these new stories in rhyme about the river, with its boats and bridges, will appeal to the love of rhythm as well as to the desire for information.

"Good things to eat! A place to run and play! Fun in the creek! A ride in a wagon and in the doctor's car! A picnic! We are going on a picnic." Lily Bell, who goes on the picnic, lives in the Land of Cotton. The youngest readers and listeners will be as excited as Lily Bell over the adventures of this lively little girl and her family which are told in a new Picture Script. At the same time they will see an interesting picture of one phase of life in the South.

ADA R. POLKINGHORNE

Mastering arithmetic.—Continuing effort to improve the learning of arithmetic is to be noted, not only in the number of experimental investigations which are constantly being reported, but also in the many textbooks in arithmetic which have appeared during the past few years. The modern arithmetic textbook reveals certain well-defined trends: (1) simplification and elimination of content; (2) change in grade placement of topics, the skills and the processes being moved upward in the grades rather than downward; (3) the spreading of topics, such as fractions, over several grades instead of massing them in one grade, a cyclical arrangement characterizing the treatment; (4) concrete problems, which are not only lifelike and adapted to the child's level but are also organized around units or centers of interest instead of being of an isolated sort; (5) the placing of emphasis on an understanding of number rather than on mere

number manipulation, graphic, pictorial, and other kinds of aids being utilized to effect a grasp of number relationships; (6) the encouraging of children to perform many varied activities in addition to the traditional task of calculating with paper and pencil; (7) the inclusion of scientifically constructed drills and reviews, often of a self-testing type; and (8) diagnostic and remedial features, as well as other evidences of recognition of individual differences in the capacity and the learning progress of pupils.

A set of books[1] has been published which appears to reflect in a commendable manner these trends in the construction of textbooks in arithmetic. The title of the set, "Master Key," refers to certain "keys" that a child needs in order to deal effectively with numbers, for example, (1) lists of abstract number relationships, such as the basic number facts in the four fundamental processes, which are thought to be indispensable to effective work in mathematics; (2) model concrete problems for which correct solutions are presented; and (3) certain rules or principles which have general application in forestalling difficulties that pupils might otherwise encounter.

Serious effort seems to have been exerted by the authors to facilitate the understanding and the learning of arithmetic. Drill is given only after attention has been devoted to understanding. Problems are ordinarily introduced on a child level before progress toward adult situations is attempted. New subject matter is introduced gradually and is retaught frequently. Difficult parts of processes are presented in later grades. The vocabulary for Grades III and IV has been checked with the Thorndike list. Long division precedes short division. Tables of squares are introduced before square root, the long method of square root being given only as honor work for the more capable pupils.

A comprehensive testing program has been provided. At intervals throughout the books appear "constant tests" in the four fundamental processes, standardized experimentally so that they are of equal value and may therefore serve as guides to the amount of improvement achieved by a pupil over a period of time. "Gateway tests" constitute a second type of measurement. These are cumulative in nature and are to be found at the end of each unit of work, the caption given to them apparently implying that proficiency in such a test insures that a pupil has passed through the "gate" from one unit to the next. In addition to these tests, there are diagnostic reviews, including test, study, and practice exercises arranged in increasing difficulty. At the end of each book is given a unique table or set of norms for the "constant tests," which is organized into Divisions A, B, C, and D. If a pupil's score falls in the "A" quadrant, he is accurate and fast; if in the "B" section, accurate but slow; if in the "C" quadrant, fast but inaccurate; and if in the "D" quadrant, both slow and inaccurate.

[1] Frank L. Clapp, assisted by Harriet Sleeper, Joy Mahachek, and Lillian Lamb Ralya, *The Master Key Arithmetic:* Grade III, pp. xii+242, $0.64; Grade IV, pp. x+260, $0.64; Grade V, pp. viii+246, $0.68; Grade VI, pp. viii+246, $0.68; Grade VII, pp. viii+278, $0.68; Grade VIII, pp. viii+278, $0.68. Boston: Houghton Mifflin Co., 1937.

Numbers from 1 to 100 appear in the table. These numbers, in the opinion of the reviewer, are likely to be confusing. The scores 50 and 51, for example, are numerically close together, and yet in the table a score of 50 means that fifteen problems are solved correctly in one minute of time, whereas 51 is interpreted to mean that sixteen problems are solved correctly in ten minutes of time. There is a vast difference represented by these abilities, which on the one hand is apparent in the fact that the scores lie in different quadrants, "C" and "B," but which on the other hand is not evident in the size of the two scores, 50 and 51.

These textbooks are published in both a three-book and a six-book edition. The work has been carefully edited, although an occasional error has been permitted to creep in. For example, in the six-book set pupils are at times referred to pages or captions for parts that appear only in the three-book edition. However, throughout the volumes there is constant evidence of the extreme thoroughness which has always characterized the work of the senior author. In the reviewer's opinion, this set of textbooks is a worthy addition to the large number of books which are at present available to the teacher of arithmetic.

HERBERT T. OLANDER

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THE ELEMENTARY SCHOOL JOURNAL

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Educational News and Editorial Comment

THE REPORT OF THE ADVISORY COMMITTEE ON EDUCATION

For more than a year the Advisory Committee on Education appointed by President Roosevelt has been making an exhaustive study of the relation of the federal government to education in this country, the purpose of the study being to identify the fundamental principles which should guide the national government in dealing with education in the states. The recently published report of the committee is an important document which should be read carefully by school people and citizens generally.

The three basic and fundamental principles on which the recommendations of the committee rest are the following: (1) While all the states should receive some aid, federal grants should be made most liberally to those states in which the educational load is the heaviest and the ability to carry it the least. (2) Control over the materials and the processes of education should be vested solely in the states. (3) No more control over education should be vested in the federal government than may prove necessary to insure an honest, legal, and reasonably efficient use of the taxpayers' money.

The following important statement of principles is quoted from the report.

When the necessity of financial assistance by the federal government is admitted, the question arises as to the extent to which there must be some degree of federal supervision over the expenditure of the funds. Fear of centralized control is unquestionably one of the major obstacles now standing in the way of further federal assistance to education. For although the American people are willing to have national action to relieve local distress, for sound reasons they are unwilling to accept federal direction over the local operation of the school system.

Local controls in government, and especially in education, have values that we should do our utmost to retain. If our school system were rigidly controlled from the state capitals or from Washington, it might become more efficient and its behavior be more predictable, but it could no longer serve to give flexibility to the social order as a whole. Suitable adaptation to local needs would be difficult.

Despite its obvious inefficiencies and limitations, local freedom helps to assure experimentation, healthy rivalry between localities, popular interest in public questions, and that diversity of form and method which tends to prevent sudden disruption of the social order. Local school administrators selected by local representatives of the people should therefore be given as much independence by state and federal governments as is compatible with an acceptable standard of honesty and activity.

There are those who argue that the federal government should provide further financial assistance to education, and that it can and should do so without extending any supervision whatsoever over the expenditure of the funds it provides. There are others who argue that aid without control is impossible, and that therefore no aid should be granted, notwithstanding the obvious fact that only through federal assistance can enough support be provided to permit suitable educational opportunities for some millions of American children.

The committee is of the opinion that both of these views contain some measure of truth, but that neither is wholly correct. Some federal aid must be provided and there must be a limited amount of control, directed primarily at honesty, legality, and efficiency in the expenditure of federal funds. It is evident, however, that the American people would rightly object to any attempt to use federal aid as a means of controlling the content or processes of education in the schools. Although the federal government must meet its responsibility to the taxpayers for the proper expenditure of public funds, and some safeguards are therefore necessary, all necessary safeguards of this type can be provided without bringing the federal government into the local management of schools.

The committee has attempted to formulate the principles that should be regarded as controlling in all federal legislation providing grants to the states for educational purposes. These principles may be stated as follows:

1. The major portion of all federal aid for education should be granted as a general fund for the current support of elementary and secondary education. In order that states and local school jurisdictions may have the necessary flexibility in the development of programs suited to local conditions, the specification of particular phases of elementary and secondary education to be supported from such a fund should be avoided.

2. The major portion of federal aid for education should at all times be granted on a basis that tends to lessen inequalities of opportunity among states and within states.

3. Federal grants for special educational purposes may properly be used to bring about attention to educational matters of special national concern and thus to improve the educational programs conducted under state and local auspices, but such grants should be considered with very great care to see that improvement does in fact result. The states are the units for the organization of educational programs; the methods of making grants should therefore avoid so far as possible the overdevelopment of any one phase of a state program at the expense of other phases.

4. The federal government should record its purposes explicitly but broadly, leaving to the states wide discretion and flexibility in the administration of the federal grants, although those grants should be conditioned upon distribution within states in conformity with the general purposes for which the grants are made.

5. The general principle of co-operation between the federal government and the states, without coercion by either party, should dominate legislation providing for federal grants; but wherever the major purpose of the grants is to bring about progress toward equality of educational opportunity, matching of funds by the states or local communities should not be required. Help is most needed in those areas where matching would be unjust if not impossible.

6. In order that local initiative and responsibility may be maintained, all federal action should reserve explicitly to state and local auspices the general administration of schools, control over the processes of education, and the determination of the best uses of the allotments of federal funds within the types of expenditure for which federal funds may be made available. The federal government should in no case attempt to control the curriculums of the schools or the methods of teaching to be employed in them. In those fields, however, it should carry on research and make the results widely available.

7. All federal grants for educational purposes to states maintaining separate schools and institutions for negroes should be conditioned upon an equitable distribution of the federal funds between facilities for the two races.

8. Federal grants should be used to build up and strengthen existing educational agencies and institutions insofar as they are able to serve important needs, and not to establish competing agencies and institutions.

9. Any system of federal grants as a whole should be consistent with sound fiscal policy and should facilitate progress in tax reform.

10. In view of the extent of existing federal relationships to state and local conduct of education and their probable increase through the years, federal relations to education should be reviewed under specially constituted and appropriate auspices at intervals of not more than ten years.

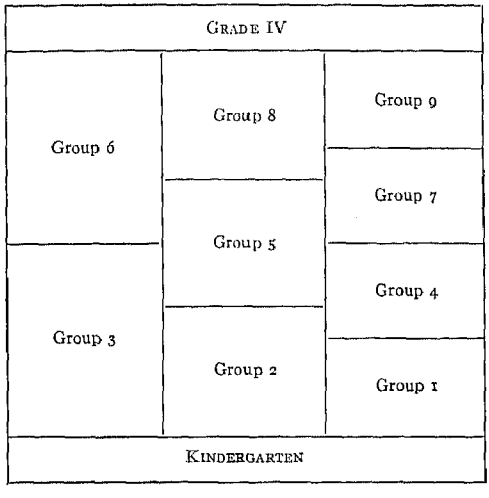
The committee recommends continuation of the existing grants now made for vocational education in the public schools, vocational rehabilitation of the physically disabled, instruction at land-grant colleges, agricultural experimentation, and agricultural and home-economics extension work. In addition to these grants, which now amount to about $50,000,000, the committee recommends new grants to be divided among six major funds. Among these the largest is for elementary and secondary schools. This grant would begin at $40,000,000 in 1939 and would be increased $20,000,000 a year until 1944–45. The second special grant, starting at $2,000,000 and rising to $6,000,000, would be to improve the preparation of teachers and other educational personnel. The third fund, $20,000,000 the first year and $30,000,000 the second and following years, is recommended for the construction of school buildings as a means of facilitating the desirable reorganization of school districts. The fourth fund, amounting to $1,000,000 at first and to be increased later to $2,000,000, is recommended for the improved administration of state departments of education. The fifth fund, beginning at $5,000,000 and increasing to $15,000,000, is for "civic, general, and vocational part-time adult educational activities" and is to be expended through schools, colleges, and other educational agencies in the states. The sixth of these special funds is for rural library services; it starts at $2,000,000 and rises to $6,000,000. These new grants will amount to $70,000,000 in 1939–40 and will rise to $199,000,000 in 1944–45. It is not to be inferred that no further federal aid to education is contemplated after 1945; after that date a reconsideration of national policy with respect to education will be in order.

The report of the committee presents, in our opinion, the soundest and the most statesmanlike program of federal aid to education that has yet been proposed. It is to be expected, to be sure, that there will be some difference of opinion with respect to the details of the committee's recommendations, but it is to be hoped that school

people everywhere will throw the full force of their influence behind the enactment into law of a program of federal aid embodying substantially the recommendations of the committee.

Here and There among the Schools

Meeting the problems of individual differences.—From Frank L. Van Alstine, principal of the Groveland School, Wayzata, Minnesota, we have received the following account of an interesting practice in meeting the individual needs of pupils in the lower primary grades.



The accompanying diagram shows theoretically how the scheme of grouping, now in use in the primary department, works.

The children enter the kindergarten at the age of five years. They are studied carefully, and by the end of the year enough information has been gathered concerning them to enable the kindergarten teacher to recommend them for the various beginning groups.

The organization provides for a three-track program of promotion leading from the kindergarten to Grade IV. The precocious children, those who have exceptional intelligence and a very rich background, are placed in Group 3. They are expected to be ready for promotion to Group 6 by the end of the year. During the second year they complete the work of Group 6, and at the end of the second year they are promoted to Grade IV. Thus, in two years' schooling they have gained one year, but they have not skipped nor omitted any of the

work in the traditional grades. These children are usually as well developed physically, mentally, and socially as other children in Grade IV.

Average children are promoted from the kindergarten to Group 2. They are expected to do average work and to progress at an average rate of speed. They are promoted from Group 2 at the end of the first year to Group 5. They spend one year in Group 5 and are promoted to Group 8. After spending a year in Group 8, they are promoted to Grade IV. Thus they have progressed at a normal rate of speed and at the end of three years are ready for fourth-grade work.

Children who are below average in intelligence or who are retarded for any reason, perhaps because of meager backgrounds, are promoted from the kindergarten to Group 1. They spend one year there and are then promoted to Group 4, then to Group 7, and then to Group 9. After spending four years in the elementary division, they are ready for promotion to Grade IV. It is found that they have about the same mental age and educational achievement as the children who have been promoted from Groups 6 and 8. The children are placed in Grade IV on an approximately equal basis so far as educational achievement and mental age are concerned. Thus it is possible for any child to excel provided he is willing to put forth the necessary effort. The entire adjustment process takes place before the child has reached the age when he feels the effect of social disapproval for being classified in the retarded group or before he becomes overconscious of being in an accelerated group. The content of the curriculum is modified by the teachers to meet the needs of the various groups. The school holds to the philosophy that the teachers are more capable of making this adjustment than anyone else.

The lines of classification are not closely drawn. A child's program may be adjusted whenever his teacher feels that he would do better work in another group. Careful consideration is given to his marks on various objective tests before recommendation for changes are made. The fact that a child is placed in Group 1, 2, or 3 when he has finished the kindergarten does not mean that he will follow that particular scheme of promotion to Grade IV. It is found, however, that a child usually follows the promotion scheme in which he is originally placed.

Groveland is making every effort to follow sound progressive educational methods. The teachers use activity units, excursions, moving pictures, slide-projection machines, stereopticons, an electric phonograph, and the radio. They secure special talent with special equipment at every opportunity. They carefully follow the recommendations of the State Department of Education and of the dean of the School of Education of the University of Minnesota. They prepare written records of the origin, objectives, procedure, outcomes, and evaluations of all major activity units. These units are filed away as future reference for the teachers as they strive to help the children study topics of interest to their particular groups.

New administrative practices in Dodge City, Kansas.—Superintendent A. G. Schroedermeier has supplied us with the following

statement descriptive of certain new administrative procedures which he has introduced into the schools under his administration.

The Dodge City elementary schools have inaugurated two projects this year which, if not truly "innovations" in administration and supervision, are at least new to this system.

The first of these involves the employment of a relief teacher, who spends one-fourth of the day in each of the elementary buildings teaching classes which would otherwise be handled by the principal. In this way the principal is freed for administrative duties.

The second project is the development, under the direction of a full-time supervisor, of a program for the prevention and the correction of reading difficulties. At the outset an intelligence test and an achievement battery were given each child in all grades except the first and the kindergarten, where intelligence tests only were administered. Teachers co-operated in working out profile charts for all children in their respective rooms. Individual tests of various kinds are given to children for whom the group tests do not, for any reason, appear to be satisfactory.

Teachers use the test results for grouping and regrouping pupils for instructional purposes and as a basis for intrinsic drills. They meet in grade groups to discuss their mutual problems; to study professional publications bearing on such problems; and to work out, under a division-of-labor arrangement, additional diagnostic exercises and remedial measures. An attempt is being made also to enrich the reading activities through the addition of a large number of supplementary and library books for each grade.

One feature of the plan is a definite reading-readiness program in the kindergarten. Reading-readiness tests are to be given kindergarten children at the end of the year to determine their preparation for undertaking the work of the first grade. Achievement tests will be administered in all other grades near the end of the semester to check progress made, and a statistical report showing the results of both testing programs will be placed in the hands of each teacher.

During the current semester a new set of comprehensive elementary records will be established throughout the system.

Since the project is new here this year, those in charge feel that the accomplishments of the current year will represent only a beginning. It is hoped that another year the program may be expanded in all directions.

Courses in the Principles of Administration for Upper-Grade and High-School Pupils

The enforcement of the recent law in France which raises the compulsory school age by one year has created the problem of finding suitable instructional materials for the added year. As a means of solving this problem in part, Maxime Rossignol, inspector of primary education, has proposed a course in the general principles of adminis-

tration which it is believed will contribute much to the preparation of youth for living in the modern world. The plan merits serious consideration by American educators. In the future the pattern of life of most individuals will be complex; it will be characterized by many human associations, by increasing co-operation. Most of us have to work with and for people, to serve their needs, to direct them, or to be directed by them. Moreover, general principles of administration, whether employed by a government, a large corporation, a small farmer, or a household manager, are much the same. A knowledge of these general principles widely diffused among the citizenry would contribute much to the orderly processes of human living.

The following statement is an abstract of an article published by Inspector Rossignol in *L'Ecole et la vie.* It was prepared for us by Mrs. S. W. Downs, Berkeley, California.

By "administration" Inspector Rossignol does not mean "administrative matters" such as are covered in civil-service examinations for various offices. Nor does he mean a knowledge requisite for various financial or legal duties, such as those of an executor or an agent. While a certain amount of administration is taught through the medium of other school studies, the subject should be taught concretely, systematically, with definite objectives and greater scope. . . . .

In general, the common concept of "to govern" and "to administer" is much the same. Yet they differ essentially. Administration basically is the examination of orders received, the endeavor to find the means of applying them, the infusion of zest into a personnel, the co-ordination of efforts, and the control of execution. On the proper exercise of the function of administration depends the success of any undertaking, be it great or small, of a public or a private character. Now it may well be said that the career of administrator is almost the only one not taught in any school. It is usually learned, if at all, without guidance, without definite method through practice in the daily affairs—in short, through the exercise of common sense subordinated in large measure to caution, tradition, and even to routine. Small wonder that misoneistic administration is frequently the subject of criticism and even ridicule on the part of the well-informed.

It would be extremely useful to the nation to have all its citizens, whatever their station and whatever the degree or the type of their instruction, provided with a general knowledge of administration. It should be obvious that the direction of any agricultural enterprise, however small in scope, or of a commercial or an occupational undertaking should be governed by the same basic principles of procedure as those applied in industrial enterprises, large or small, or in public service.

The major industrial organizations are beginning to realize the need for training in administration; hence their increasing tendency to add to their establishments actual "schools of administration," intended solely for their own use. The need for such training in public service is all too obvious. All organized activity requires administrative skill. . . . .

The problems and the complexities of modern life, in social and economic aspects, make it essential that each of us should be equipped to manage his affairs by an intelligent application of those same principles which contribute to the success of an enterprise. The creation of a kind of positive technique of action and direction is becoming one of the essential conditions in the general reconstruction in which we are even now involved—a technique equally essential for the rational use of mechanical equipment and for the adaptation of the individual to the requirements of our present society. As a means to this end there should be added to the present study of civics and the elements of common law, a thorough study of the general major principles of administration. The following subjects, intended for pupils thirteen years of age, are suggested for a tentative beginning course in administration: (1) the division of work, (2) authority (how to exercise it), (3) discipline, (4) unity of orders and instructions, (5) unity of direction, (6) the subordination of particular interests to the general interest, (7) remuneration, (8) centralization, (9) the governing body, (10) system, (11) justice (carrying out agreements or contracts), (12) selecting personnel, (13) stability, (14) guaranties due the personnel, (15) new undertakings, (16) responsibility, and (17) the union of personnel.

These topics are merely suggestive; they lend themselves to a very elastic program. Such courses in the elementary school should, of course, for the present be limited to the more mature pupils. Their primary aim should be to inculcate a feeling of system. No scientific or formal lessons, no abstract theoretical instruction, no political-economy course.

However, no matter whether one is the head of some business, of an agricultural project, of an industry great or small, of some public administration, or of a private one, in all these there are a certain number of fixed principles of action common to all and essential for success. Whether an employee or a common laborer in any such undertaking, a person should be equally familiar with these same principles in order really to understand his peculiar role and his place in the enterprise, to become aware of his responsibilities, to realize all that pertains to the development and the ultimate aim of the enterprise. Employee and employer, the problem is precisely the same. Basically it is a question of the same principles of action, namely, the formation of mental habits of order and of creative ability, initiative. The five basic elements essential in all types of administration are: foresight, organization, authority, co-ordination, and control.

The type of instruction should be of the simplest. It should deal with concrete examples; with reading, direct observation, and study of local administrative affairs; visits to factories and plants, to business establishments, farms, and offices. In certain cases actual examples of various types of documents should be

studied: a labor contract, a social-insurance policy, a lease, a time schedule in a large store or the plan of all the work in a factory, legal provisions, etc. Films should present examples of "chain" work in the factory, of the processes involved in various human activities pursued in common, their co-ordination and control. The pupils might also be encouraged to keep notebooks containing a record of their observations, outlines, formulas, definitions, statistical data, and terms appertaining to this special vocabulary. Eventually someone may write a textbook for this subject. However it may be achieved, the need for training in administration, as evidenced in professions, in business, and in other enterprises by their seeking for a personnel trained in administration and by the efforts of the present minister of education to combine all such training in a high school of administration, must be met. The extra year of elementary education should serve as an admirable starting point for universal training in administration.

Mass Education in China

The following statement is quoted from a recent issue of *International Pedagogical Information*.

An important role is being played [in China] by mass education in the efforts for unification against the Japanese. In the course of the past year the Chinese government has set up 112,000 "mass" schools to fight illiteracy. In 1936–37 the cost amounted to $5,000,000 and for 1937–38 a sum of $8,000,000 has been set out. In the past year these schools were visited by 16,555,000 pupils.

In addition to these efforts on the part of the state, there exists a kind of itinerant teaching by lay teachers. Not only are real schools used as classrooms, but temples, tea shops, and, indeed, any available space—there are discussion groups in kitchens, corridors, and in the open air. One slogan says: "Pass on what you have learned to your neighbor." There is in operation for this a sort of courier system—for instance, a farmer who received an hour's instruction is put under an obligation to instruct his wife at home. A woman who works in a factory in Shanghai gave instruction to thirty women for a month during the midday rest; two others opened classes. A new phonetic script is intended to facilitate the learning of writing by illiterates.

In this way there are at the present time already nearly a million lay teachers who are passing on their knowledge to their families and among their friends, instead of first waiting for a government law on compulsory school education.

Democracy in School Administration

An important issue in American education is the extent to which principals, teachers, and other employees of the school system are to participate in the determination of fundamental policies and to share the responsibility of carrying those policies into effect. In

the *University of Michigan School of Education Bulletin*, Edgar G. Johnston discusses the problem of the teacher as a co-administrator in such a forceful way that we feel justified in quoting his statement at some length.

In recent discussions of education probably no word has been used more freely—or more frequently abused—than the term "democracy." One hears much of the school as chief bulwark of democratic institutions, of democracy in the classroom, of education for democracy, of democratic administration. We find, however, little unanimity as to the meaning of the term "democracy" or the specific implications for school procedure. A definition which seems to carry special significance is that which characterizes democracy as "responsibility widely shared." Accepting this definition of the term and agreeing that administrative and instructional procedures must exemplify the democratic process if the school is to pay more than lip service to the ideal, we find certain definite responsibilities and limitations placed on teacher and administrator alike. In an earlier discussion ("The Principal as Co-ordinator," *School of Education Bulletin*, II [January, 1931], 52–54) the writer presented what seemed to him a sound analysis of the administrator's role. In the present article it is proposed to explore some of the implications of democratic administration for the classroom teacher.

Crucial to this concept is the recognition that all members of the staff should have a part in determining policies and in accepting responsibilities for them. This means willingness to give time and thought to the consideration of problems which affect the school as a whole and to subordinate personal preferences and narrow interests to majority opinions. There is no place here for departmental nationalism. Are faculty meetings a bore? Do teachers sit passive through them with their eyes upon the clock? Then something is fundamentally wrong with the organization of the school. It may be that the administrator has utilized staff meetings as an opportunity for handing out decisions he has made or for consideration of topics which seem important only to him. It may be that the members of the teaching staff have been unwilling to assume the responsibilities of professional status and to consider themselves as full-fledged partners in a significant educational enterprise.

In the school which is in reality a co-operative community the staff meeting should be the most vital phase of the school's organization. What common philosophy underlies the program? What peculiar characteristics of the community should be taken into account in determining the curriculum? What pupil needs are still unmet? Is satisfactory provision made for pupil guidance? Are there improvements in instructional techniques or curriculum organization which should be made? Is the system of evaluation adequate? It is on the basis of considerations such as these that major decisions of school policy should be made. These are not matters to be decided by administrative fiat but co-operative decisions to be arrived at through democratic processes. They are

sufficiently significant to challenge the experience and the disinterested judgment of the entire staff in their solution. Only by painstaking, enthusiastic, and co-operative effort is genuine progress achieved.

The concept of the school as a co-operative enterprise with shared responsibility carries with it a change in the teacher's attitude toward nonteaching duties. It is not merely a matter of accepting uncomplainingly the assignment of extra tasks. The professional-minded teacher in a democratic school will achieve a much more dynamic conception of his role. Modern education has long since burst the confines of classroom walls. Extra-curriculum activities are an accepted part of the program, and responsibility for their supervision by members of the teaching staff is taken for granted. The relationship of the home-room teacher to a group of pupils for whom he serves as guide, counselor, and friend is increasingly accepted as a basis of school organization. Parents are looked upon as partners in the enterprise to which they and the teaching staff alike are dedicated. The various agencies of the community are recognized as powerful influences, capable of assisting the school materially in achieving those high responsibilities which modern conditions place upon it or of preventing any significant success. Each extension in the range of school contacts adds new administrative problems and the broadening horizon of educational objectives brings new responsibilities to the members of the teaching staff. The task of the school is no less than the co-ordination of all the influences which are brought to bear upon the child to the end that each individual pupil may develop to the maximum degree his unique capabilities in terms of social usefulness and personal adjustment. This responsibility the school staff shares in common. The principal has a special function to perform in co-ordinating the effort of all those who contribute to the common aim. The administration of various phases of the complex activities which constitute the program of a modern school will use the resources of every member of the staff working individually or in committee groups. Upon each one falls the responsibility for seeing the school's assignment in its entirety and for seeking out those phases of the common program—nonteaching as well as teaching duties—in which his contribution will be most effective. This active and responsible relationship to administrative duties which fall to the teacher's lot is far different from the grudging—or even cheerful—acceptance of imposed duties. The master and servant concept of administrative relationship has too long dominated American education. The democratic ideal implies a co-operative approach of self-respecting equals to their varying functions in the performance of a common task.

The Improvement of Educational Opportunities for Negroes in the South

Although the disparities in the educational opportunities afforded white and negro children in the South are still great, there has been in recent years a marked improvement in both the quantity and the

quality of schooling provided negro children. In other parts of the country it is sometimes assumed that the inadequate support of negro schools is due primarily to the indifference or the opposition of southern whites. In reality, negro schools are poor because most southern states lack the economic resources with which to support an adequate educational program for either white or colored children. As it is, the southern states as a whole spend a larger percentage of their total income for the support of their schools than do other parts of the nation. If they were to spend as much per child of school age as is spent in the nation as a whole, the burden of taxation would be staggering. In 1930 the national average expenditure per child of school age (five to seventeen) was $58. If the model tax plan worked out by Professor Newcomer, of Vassar College, had been in operation in all the states in that year, eight of the southern states would have found it necessary to spend 100 per cent or more of all the revenue raised by such a tax plan to provide $58 for each child of school age. In South Carolina and Mississippi it would have required the expenditure of 191 and 178 per cent, respectively, of all the revenue raised under such a model tax plan.

In the *Biennial Report and Recommendations of the State Superintendent of Public Education to the Legislature of Mississippi, for the Scholastic Years 1935–1936 and 1936–1937*, P. H. Easom and J. A. Travis, state agents for negro schools, discuss at some length the problem of negro education in that state. The picture of negro education as they paint it is indeed dark, but the following quotation from the superintendent's report indicates that the educational leaders of Mississippi are attacking the problem with intelligence and courage.

The present program.—The State Department of Education has worked out a definite educational program for the negroes. On the elementary-grade level, the state proposes to teach all the children of the race how to read, how to write, how to talk, how to use numbers, how to use their hands in doing their work and in earning a living, how to be clean and healthy, how to be honest, truthful, courteous, and how to take care of property. This program, it is believed, is based upon their needs, is sane and constructive, and will contribute to the general uplift of the race. This program, if carried out in all the schools of the state through the grammar grades, will be a decided improvement over anything that has ever been done for this racial group in the past.

It is the plan of the State Department of Education to develop at least one good institution of high-school grade in each county. Twenty-eight counties have no high-school offerings at the present time. In a few sections of the state where the negro population is sparse, one high school might serve several counties. A system of agricultural high schools or vocational schools would meet this need adequately. These schools should emphasize, above everything else, health and economic efficiency. The state must train all of its citizens to support themselves so that they will not be dependent upon the government. Coahoma, Carroll, Jasper, and Sunflower counties have already met this need by establishing county agricultural high schools for negroes.

The next most important feature of this program, yet to be realized, is the establishment of a teacher-training institution for the exclusive purpose of training rural and elementary teachers for the little one-, two-, and three-teacher rural schools of the state. Jackson College, Jackson, Mississippi, with its fifty acres of land and six brick buildings, has been offered to the state by the church board that owns it, without cost, provided the state will take it over as an educational institution for negroes. In the face of the tremendous need for qualified teachers, the state could not do a better thing than to accept this generous offer, especially in view of the fact that this institution could be operated with a relatively small appropriation.

School plant and equipment.—Of the 3,753 negro schoolhouses in Mississippi, 2,313 are owned by public-school authorities. The other 1,440 schools are conducted in churches, lodges, old stores, tenant houses, or whatever building is available. Comfortable schoolhouses need to be erected to displace the many little shanties and churches that are now being used.

There is also dire need for school furniture and teaching materials—comfortable seating facilities, stoves, blackboards, erasers, crayon, supplementary reading materials, maps, flash cards, charts, etc.

In many of the 3,753 colored schools of the state, there is not a decent specimen of any one of the above mentioned items. In hundreds of rural schools there are just four blank, unpainted walls, a few old rickety benches, an old stove propped up on brickbats, and two or three boards nailed together and painted black for a blackboard. In many cases, this constitutes the sum total of the furniture and teaching equipment of hundreds of our negro schools. In several cities of the state, modern buildings have been erected with the aid of the P.W.A. and W.P.A., but practically nothing has been done to improve the rural-school plants. In all, the P.W.A. and W.P.A. expended $8,000,000 for the building of white schoolhouses, while only $400,000 has been spent for the building of negro schoolhouses. Where the need was the greatest, practically no aid was made available.

School terms.—School terms for the past biennium in rural areas were, with few exceptions, five months. A few counties ran their negro schools less than five months. The term in separate school districts was eight or nine months. Usually, the term in these schools is the same as it is for white schools. In an

effort to maintain longer school terms in rural areas, patrons frequently provide funds from private sources for this purpose.

Teachers.—There are 5,972 negro teachers in Mississippi. Approximately 500 of these are college graduates, 2,472 have had some college training, and 3,000 are of less than college grade. Sixty per cent of the entire teaching force attended summer school each summer during the biennium in an effort to improve their training.

Salaries.—At the beginning of the biennium, the State Board of Education set up a salary schedule of $28 per month for a five months' term, or a total of $140 per year; but in many counties the salaries have averaged less than this amount. The typical salary for rural teachers has been $25 per month for a five months' term. It is obvious that teachers cannot live on this small sum and maintain any sort of decent standard of living. Many of these teachers have dependents. The small salary and short school term make it compulsory that teachers earn a part of their living by engaging in some other type of work, usually farming or domestic service. As a consequence of the low salaries, many of our best teachers have gone into other sections of the country or into other lines of work where remuneration is more liberal.

High-school facilities.—High-school advantages for negroes in Mississippi are very meager. Ninety-four per cent of the educable negro population of high-school age is not in school. Only 7,674 pupils, or 6 per cent of the state's educable negro children of high-school age, were actually enrolled in the ninety-three high schools during the 1936–37 session. There are twenty-eight counties in Mississippi which do not have any recognized high-school facilities for negroes. Fifteen counties make absolutely no provision whatever for high-school training of negro children. Of the fifty-four recognized four-year high schools for negroes, fifteen are privately owned and supported. These fifteen private schools enrol slightly less than one thousand pupils. Only eighteen negro high schools in Mississippi have been given any recognition by the State High-School Accrediting Association. Three negro high schools are accredited by the Southern Association of Colleges and Secondary Schools. Attendance problems in negro schools constitute a real challenge to our educational leadership. Certainly something should be done to improve conditions in the twenty-eight counties which do not have recognized high-school advantages for negroes. The need is even more urgent in the fifteen counties which offer no high-school advantages whatever. The high-school curriculum should provide such training as will equip the youth for the vocations in which they are to engage—agriculture, carpentry, plastering, blacksmithing, auto mechanics, domestic service, nursing, etc. . . . .

Recent progress.—Since the depression much more interest has been manifested in the improvement of negro schools than for the past decade. Salaries have been increased in many counties, and also terms have been lengthened somewhat. Only in a few counties in the state, little or no progress has been made.

During the biennium those in charge of negro schools in the state have been

spending some time in meeting with county boards of supervisors, county school boards, county superintendents of education, and other white groups with reference to the improvement of the colored schools. On every single occasion an enthusiastic response has been given to these efforts. It is felt very definitely that the colored schools in Mississippi are now on the upgrade. Of course, everyone knows that there is a long distance to go yet before an adequate system for the training of the colored youth of the state can be provided; yet it should be said that there is more interest in this question and that definite progress is now being made. . . . .

Recommendations.—One-half of the population of Mississippi is made up of negroes. If this state is to keep pace with the development going on in other states of the Union, and especially in our neighboring southern states, the time has arrived when we must give serious consideration to the question of providing better facilities for the training of our negroes. The state owes it to them to give them a chance to become a self-respecting, self-supporting, law-abiding people. A modern state with 51 per cent of its population poor, ignorant, and untrained will find itself not only helpless, but it will sooner or later be in danger of becoming a prey to vicious, self-seeking leadership. From a Christian standpoint, from an economic standpoint, and from a standpoint of the health of our people, we should give more serious consideration to this question. All efforts to provide training for our negro population should emphasize practical and vocational training, good citizenship, and health.

The most urgent need in the field of negro education is for trained teachers. Without trained teachers, any worth-while educational program is impossible. The facilities for training teachers, both public and private, now available are wholly inadequate. It is recommended, therefore, that the state establish at least one institution for the training of rural and elementary teachers for the large number of small rural schools.

Who's Who in This Issue

William C. Reavis, professor of education at the University of Chicago. Clarence R. Stone, author and editor of textbooks and professional books on education. Albert Grant, statistician at the Psychological Laboratory of the Public Schools, Cincinnati, Ohio. Luella Cole, lecturer in education of the Extension Division of the University of California, and independent research worker and author. Katherine L. McLaughlin, professor of education at the University of California at Los Angeles.

THE RESPONSIBILITY OF THE CITY SUPERINTENDENT FOR THE SCHOOL CURRICULUM

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Analysis of the original duties prescribed for the superintendent by boards of education at the time the city superintendency was established discloses that his major responsibility pertained to instruction. The curriculum which he found in use—that of the ungraded district school—was not applicable to the graded system which was in popular demand in cities at the time. Since the board members were unable to make the transition from the ungraded to the graded curriculum, the responsibility for this reorganization was placed upon the superintendent. Thus, from the inception of his office the city superintendent has had a unique opportunity to contribute to the school curriculum.

It is not my purpose to review the history of this contribution of the American city school superintendent during the one hundred years of the existence of his office, although this history would provide a most valuable background for the consideration of the topic chosen for discussion. I shall attempt to show what responsibility for the school curriculum some superintendents have accepted and what all superintendents should prepare themselves to undertake.

The superintendent should first of all determine the locus of his responsibility for the curriculum. He should know the legal prescriptions with respect to the curriculum in his state, the requirements of the state department of education, the specifications embodied in local school-board rules, and the standards of accrediting associations which must be met. All these requirements should be considered as minimum obligations. The superintendent is then free to go beyond requirements as far as his board of education will permit and his teaching staff is prepared to advance. The unspecified area which he is privileged to explore will ordinarily provide him with sufficient latitude for noteworthy contributions.

The failure of some superintendents to make specific contributions to the school curriculum is caused by inability to determine the nature of their responsibility in this field. They appear to regard the curriculum as fixed by law, rule, and practice and, therefore, not susceptible to significant change. As a result they become perfunctory administrators of the curriculum and are content to use the minimum syllabi provided by state departments of education or to base instruction on the content of adopted textbooks.

Progressive superintendents invariably go far beyond minimum requirements. They seek to supplement the requirements through the use of local contributions, through the addition of supplementary materials of instruction, and through the preparation of unit guide sheets. They also provide in-service training of teachers in the use of the materials of instruction as a means of facilitating the development of higher mental processes on the part of pupils and the enrichment of social experiences. These superintendents encourage the exercise of initiative by their principals and teachers in the production of curriculum materials, and they organize their staffs to collect and distribute the findings of curriculum research. In the schools of these superintendents instructional materials undergo continuous development and change within the area in which modifications are possible.

The possibilities of contributions by the staff in a local school system are largely dependent on the superintendent's conception of the curriculum. Vagueness on his part usually results in uncertainty and ineffectual efforts on the part of the staff. That this vagueness presents a real problem in educational administration is amply supported by recent evidence[1] on the curriculum conceptions of administrative officers. The findings reveal conflicting conceptions of the most serious sort, ranging from ultra-radical views to a degree of conservatism approaching medievalism. In schools with leaders of extreme views, worth-while contributions to the curriculum can scarcely be expected. The hope for progress, therefore, rests with the group of superintendents whose views are psychologically sound and administratively practical.

Relatively few superintendents, however efficient, are qualified

[1] Unpublished material gathered by the author.

today to prepare a school curriculum as did Superintendent William T. Harris, of St. Louis, in the late seventies of the past century. In fact, it would not now be considered wise administration for a superintendent to do so even if he could. His contributions to the present-day curriculum should consist rather in the following types of service: (1) the interpretation of the curriculum to the members of the administrative and the teaching staffs and to the supporting community, (2) the modification of the curriculum to provide for local needs, (3) the enrichment of the content of the curriculum to provide better general education, (4) the vitalization of curriculum materials for instructional purposes, (5) the organization of the entire staff for the production of curriculum contributions, and (6) the continuous appraisal of the curriculum as a basis for reorganization and improvement.

CURRICULUM INTERPRETATION

When the superintendent's conception is characterized by vagueness and lack of insight, his plight as an interpreter of the curriculum is apparent. Since the clarification of the views of the staff members with respect to the curriculum is a function of supervision, the superintendent rises or falls in the estimation of his staff on the basis of his contribution as interpreter. Obviously, then, the superintendent who attempts to be the professional leader of his teaching staff must acquire a comprehensive grasp of the school curriculum.

As the reputed intellectual leader of his staff, the superintendent must be able to clarify the views of his staff members regarding the general aims of education and the specific aims of each field. Inability to evaluate the views of his staff with respect to educational aims encourages mental lethargy among the personnel or invites curriculum practices of an irresponsible trial-and-error type. Thus it is apparent that the superintendent must accept responsibility for directing his teaching staff if contributions are to be made toward curriculum improvement in the city school system.

Since the superintendent is regarded by the public as its educational statesman, he must assume responsibility for enlightening the public regarding the functions of education and the effectiveness of instruction in the local schools. This responsibility requires that he

accept the role of interpreter of education in its larger as well as its local aspects. He must justify the curriculum in use in the local schools and defend it through comparison and contrast with the curriculums of earlier periods now idealized by some of the critics of present-day schools. He will be called upon to evaluate the so-called "fads and frills" and the "isms" of the various educational cults and to give assurance to supporters whose children are in the schools that the local program of studies fully and properly prepares their children for fruitful living in an ordered society. Ambiguity or superficiality of exposition on his part will inevitably lead to loss of confidence in the integrity of his leadership and in the efficiency of his program. Thus it is apparent that the support of education in the local community will be conditioned largely by the ability of the superintendent to create a favorable public opinion with respect to the soundness of his educational views.

MODIFICATION OF CURRICULUM TO LOCAL NEEDS

Since the scope of the superintendent's influence on the curriculum is locally restricted, he should not overlook the opportunity to make specific contributions in the adaptation of instructional materials to local needs. To this end he should encourage his staff to investigate local conditions and to ascertain local needs as a basis for modifications. For example, through survey the fact might be established that the population of the community is highly mobile and that relatively few of the children receive all their public education in the local schools. The large objectives of the curriculum are therefore unrealized for most of the pupils because of broken sequence in their work occasioned by the frequent moving of parents from place to place. This condition might suggest a spiral reorganization of the basic curriculum to facilitate orientation at several grade levels and to insure fundamental experiences for all pupils. For the superintendent to overlook or to neglect local need is to lose the opportunity for making a positive contribution to curriculum administration in the school system under his charge.

Further contributions of local value can be made by the superintendent through the differentiation of instructional materials to provide for the needs of variant pupil groups. The classification of pu-

pils according to probable learning rate and the grading of materials according to group needs contribute to learning and teaching success and to the elimination of school waste. It is needless to say that, without the active interest and the sympathetic encouragement of the superintendent, neither principals nor teachers are likely to contribute much to curriculum differentiation. On the other hand, the positive leadership of the superintendent will serve as a powerful challenge to the members of the staff to undertake creative contributions in the direction indicated.

Whatever the form of the local curriculum, the superintendent is responsible for two conditions: (1) the frequency and the character of the duplication of content in instructional materials and (2) the extent and the nature of omissions. Both of these conditions are too frequently ignored by American superintendents of schools.

The investigations of duplication in the curriculum reveal much repetition of content from grade to grade and from division to division of our public-school system. The mere fact of duplication does not imply that the superintendent must seize the pruning knife and immediately begin to lop off portions here and parts there. His real responsibility is to ascertain what is repeated and whether elimination would result in loss or gain.

For instance, Osburn's evidence[1] with respect to duplication in United States history in elementary and secondary schools reveals that approximately two-thirds of the materials taught twice consisted of facts. The most prominent duplication involving thinking consisted in making summaries and giving descriptions. Duplications calling for the use of the more important mental processes, such as analyzing, evaluating, giving proof, and establishing sequences, were hardly discovered at all. Such findings indicate that superintendents could obviously make important contributions by divesting the course in history of some of its factual debris.

The superintendent is confronted with an equally important responsibility if his school curriculum is conspicuous for important omissions. In such instances careful supplementation is required to compensate for the omitted portions. The evidence indicates that

[1] W. J. Osburn, *Overlappings and Omissions in Our Courses of Study*, p. 60. Bloomington, Illinois: Public School Publishing Co., 1928.

omission of content is probably a more serious fault in the curriculum than duplication. The tendency of textbook-makers to condense their materials and to resort to abridgment frequently necessitates local enrichment as a means of providing adequate experiences.

CURRICULUM ENRICHMENT

Inasmuch as the enrichment of the curriculum is largely a local function, contributions in this direction are dependent in no small measure on the superintendent. At least, the appropriations for school and classroom libraries, for general reference material, and for supplementary aids will be determined by the superintendent's interests. If he conceives the curriculum solely in terms of basic textbook content to be mastered by the pupils, appropriations for supplementary materials are likely to be paltry. If he views the curriculum as consisting in basic experiences essential to general education, budget allotments for supplementary materials will be generous.

The responsibility of the superintendent for the enrichment of the curriculum does not end when he has influenced the school directors to make substantial appropriations for the purchase of supplementary materials. The real enrichment depends on the quality and the appropriateness of the materials selected for supplementary purposes. These materials must actually broaden the scope of the curriculum and augment its content.

The proper selection of supplementary materials and aids to instruction requires (1) a thorough understanding of curriculum deficiencies with respect to local needs and (2) a broad knowledge of the sources of materials which will supply the needs. Only through the pooling of continuous investigations of supplementary materials by the members of the entire staff can the superintendent be assured that budget appropriations for enrichment purposes will be effectively spent.

Services of the kind just implied are not secured from staff members without adequate motivation and special direction. Whipple's investigation[1] shows that superintendents in city school systems rely on their staff members for assistance in the selection of textbooks and supplementary materials but that the guidance given to the mem-

[1] Gertrude Whipple, *Procedures Used in Selecting School Books*. Chicago: University of Chicago Press, 1936.

bers in the discharge of the function varies with the individual superintendents so markedly that the practices in general cannot yet be considered efficient. It can therefore be concluded that important contributions in the technique of selecting supplementary materials for enrichment purposes remain to be made.

Another source of curriculum enrichment consists in the use of significant local materials, such as local history, biography, industrial processes, and art contributions. These materials may have great intrinsic value for purposes of general education and may frequently serve as a vitalizing influence to required content. The encouragement to use such materials and the impetus to relate them to the general curriculum, however, must be provided by the superintendent. If he is to make a personal contribution in the direction indicated, his perspective with respect to the curriculum needed for general education must be clear and his interest in instructional materials must be contagious.

VITALIZING INFLUENCE

In the opinion of Uhl,[1] the ability to exercise a vitalizing influence on the school curriculum is the most vulnerable spot in the superintendent's preparation. Basing his views on the findings of Bair[2] with respect to the social and the intellectual background of the superintendent of schools, Uhl concludes that the average superintendent is all too frequently a poor guide to curriculum change because of the fact that his education in the formative period was greatly restricted by poor environment and mediocre schooling. In many instances the superintendent has had only formal and relatively unfruitful elementary and secondary schooling and hence is largely dependent on his college experience and his graduate training for the breadth of his intellectual views. As general administrative problems tend to dominate his attention, he is confronted with the task of re-educating himself for curriculum leadership.

Since the superintendent, because of sheer lack of physical pow-

[1] Willis L. Uhl, "The Changing Curriculum and School Administration," *Educational Progress and School Administration*, pp. 198–200. New Haven, Connecticut: Yale University Press, 1936.

[2] Frederick Haigh Bair, *The Social Understandings of the Superintendent of Schools.* Teachers College Contributions to Education, No. 625. New York: Teachers College, Columbia University, 1934.

ers, is forced to delegate many duties to assistants, he will naturally delegate those duties that he is least qualified to perform, among which all too frequently is his responsibility for the curriculum. In so doing, he should not abdicate his responsibility for leadership in this field. While much of the work of curriculum improvement can be and should be delegated to staff members, the superintendent must be the vitalizing influence which sets the forces in motion. The proper exercise of this influence is considered by many to be a primary responsibility of the present-day superintendent.

ORGANIZATION FOR CURRICULUM PRODUCTION

In order to systematize curriculum contributions in the schools of a city, the superintendent is compelled to set up an organization which will secure the co-operative effort of all the members of his staff. Not all superintendents, however, will attempt to function in this respect. Some may hold that worth-while results cannot be obtained through the general participation of teachers in curriculum-making; others, on the contrary, will insist that the best way to improve the curriculum is through the enlistment of the intelligent and enthusiastic participation of the classroom teachers in the production of instructional materials.

The authorities in school administration very generally accept the latter view. While support for their contention rests chiefly on consensus of opinion, their position is not altogether without experimental confirmation. Holloway,[1] for example, in his study of participation in curriculum-making as a means of supervision in certain counties in Delaware, found (1) that the teachers engaged in curriculum-making did much more professional reading than they had ever done before in any one year and more than the teachers of the control groups did during the period of the investigation; (2) that the teachers of his experimental groups continued to improve in professional spirit, attitude, and teaching skill in the years immediately following the experiment at a faster rate than did the teachers of the control groups; (3) that the children in the schools constituting the experimental groups made slightly greater gains in the

[1] William J. Holloway, *Participation in Curriculum Making as a Means of Supervision of Rural Schools*, pp. 2–4. New York: Teachers College, Columbia University, 1928.

functions tested during the period of the experiment than did the children with whom they were compared; and (4) that the communities served by the experimental teachers were brought into closer relation to the work of the schools through the growing power of initiative on the part of the teachers and the vitalizing effect of the curriculum-making projects in which they were engaged.

The implications of Holloway's study and of other studies of similar character are (1) that active participation in curriculum improvement tends to improve teachers' classroom efficiency more than does supervision of the customary type, (2) that systematic curriculum study and production is a most effective means of securing professional growth of teachers in service, and (3) that the curriculum most likely to be administered effectively is that which is constantly being studied co-operatively by administrative and supervisory officers and the members of the teaching staff.

A comprehensive curriculum project under wise leadership tends to become a means rather than an end. It provides the occasion for a functional reconsideration of educational theory and practice and the specific motivation for continued professional improvement. The completion of such a project acts as a recoil for a new attack on a different level. Thus, curriculum projects, properly conceived and successfully launched, provide the momentum for the continued professional growth and development of all members of the school staff, including the superintendent.

CONTINUOUS CURRICULUM APPRAISAL

Whether or not the superintendent of a city school system has personally contributed to curriculum improvement, he must accept responsibility for the status of the curriculum in the schools over which he has charge. His responsibility, therefore, compels him to take stock of the curriculum from time to time as a measure of professional self-defense, if for no other reason. In this appraisal he may prefer to ask his board for a budget appropriation that will enable him to have an evaluation made by specialists from outside the system, or he may choose to organize the supervising members of his staff to undertake the appraisal as a self-survey project in supervision.

Although opinion is divided as to which of the methods is the more successful, agreement is general with regard to the necessity of some kind of appraisal as a basis of improvement. The evidence assembled by Trillingham[1] from 93 cities which had carried on curriculum projects shows that the consensus of staff members concerning the results was decidedly favorable. For example, 86.4 per cent of the respondents considered that the content of the curriculum had been improved and enriched as a result of the activities carried on; 85.3 per cent, that a gain in teacher growth and morale had taken place; 84.2 per cent, that classroom methods had been improved; 82.1 per cent, that pupil growth and interest had been increased; 81 per cent, that the administrative and supervisory officers had been professionally stimulated; 76.7 per cent, that textbooks and educational supplies had been improved; 71.3 per cent, that a new emphasis on research and experimentation had been developed; and 67 per cent, that a definite improvement in the attitude of board members toward continuous curriculum improvement had been achieved.

Since the curriculum necessarily determines, to a large extent, the character and the use of the school plant, the kind and the amount of educational supplies and equipment, the nature of the supervisory program, and the needs for pupil guidance, it is clear that continuous appraisal is essential to successful curriculum administration on the part of the superintendent. Without the knowledge which such appraisal can provide, it is difficult to comprehend how a superintendent can chart a course of progress for a system of schools or how he can presume to lead a corps of professional workers.

[1] Clinton C. Trillingham, *The Organization and Administration of Curriculum Programs*, p. 139. Southern California Education Monographs, No. 4. Los Angeles: University of Southern California Press, 1934.

MAJOR TYPES OF INSTRUCTIONAL ACTIVITIES IN READING

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The excellent new yearbook[1] on reading sets forth the objectives and the general principles of instruction in reading in a thoroughgoing fashion and does not neglect a treatment of the nature and the types of reading. Apparently with full intention, the matter of differentiation in method according to major types of instructional activities in reading was omitted. The writer considers this phase of the whole problem of reading instruction to be exceedingly important in obtaining better results in reading and therefore offers an analysis, with a formulation of method principles, for each major type.

It should be pointed out, however, that there is a minimum of differentiation in the major types of instructional activities at the beginning, increasing differentiation with advance through the elementary grades, and a decrease beyond the elementary school.

FUNCTIONAL RELATED READING

Appropriately, current educational theory and practice are laying stress on the importance of functional reading in relation to integrated instructional units, centers of interest, activities, and different subjects of the curriculum, and to its importance as a means of learning to read as well as a means of experience, growth, and acquiring of information.

An important principle to observe is that of naturalness. Too often reading of this type is artificial and forced rather than naturally and genuinely related.

In the early stages the child's reading of co-operatively formulated

[1] *The Teaching of Reading: A Second Report.* Thirty-sixth Yearbook of the National Society for the Study of Education, Part I. Bloomington, Illinois: Public School Publishing Co., 1937.

charts, bulletins, and news sheets may appropriately be largely memory reading without ability to recognize independently all the words.

While a certain amount of functional related reading will be on a work-type basis, there should also be ample opportunity for reading for fun to satisfy curiosities aroused, to broaden the informational background, and to extend and enrich experience. In such activities instruction in reading is indirect and incidental. Growth in ability to read is a by-product of the main educational objectives involved.

There seems to be no justification for limiting the educational reading activities in order that complete integration in the educational program may be obtained. Such a plan would be unnatural in comparison with the diversity found in any other life-situation.

INDIVIDUAL RECREATIVE READING

While individual recreative reading, an important division of instructional activity in reading, is touched on in various connections in the new yearbook and one whole chapter is devoted to the school library, the principles which guide the teacher during the periods devoted to this important activity are not set forth.

The following teacher guides in this connection are quoted from a recent course of study in reading.

2. What should be the main aims of the teacher in planning activities for the weekly periods devoted to this phase of the reading program?

a) To stimulate a desire on the part of each child to read independently for the mere joy of it.

b) To lead the child who reads undesirable books to substitute desirable books voluntarily.

c) To develop the habit of regular, independent, recreative reading of varied and desirable types.

d) To provide opportunities for the children to obtain materials for recreative reading to be done during spare time at school and possibly at home also.

e) To provide experiences in selecting, withdrawing, and returning books as a step leading to the use of public libraries.

f) To provide opportunities for a certain amount of browsing as a preliminary to book selection.

g) To determine the guidance needs of the children with respect to their habits of reading and what they read.

3. Should individual recreative reading be upon a voluntary, pupil-choice basis or upon an assigned and required basis?

The objectives of this phase of the reading program will be best realized by keeping the individual recreative reading and all activities related thereto upon a voluntary, pupil-choice basis.

4. Should the weekly periods set aside for this phase of the reading program be devoted largely to actual reading by the children?

Some of this time may well be devoted to actual reading by the children in order that the teacher may study the reading habits and interests of the children, and there should be opportunity for the children to browse and sample in selecting materials; but the major portion of the program time given to this phase of reading should be devoted to other related activities.

5. What are some of the more valuable activities and other means directly related to the realization of the objectives of this phase of the reading program?

(Special Reference: *Reading for Fun* by Jenny Lind Green, chapter x, "How To Teach Reading for Fun at School.")

The following is only a partial list:

a) Visits to public library.

b) Exhibits of attractive paper covers of books which at least some of the children can read.

c) Exhibits of collections of books obtained from libraries, homes, and stores.

d) Character impersonations, dramatizations, and pageants.

e) Audience reading of brief excerpts by the teacher and individual pupils.

f) Brief voluntary oral reports of books read with the objective in mind of helping others in locating interesting books.

g) Audience reading of published reviews of books within the reading ability of some of the children at least.

h) Returning, selecting, and withdrawing books.

i) Browsing, sampling, and conferring with other children and the teacher in selecting books.

j) A great variety of experiences in other subjects and activities that make children want books. "What children need most of all is a school curriculum of experiences which make them hungry for books."—Jenny Lind Green.

k) Formulation of standards for distinguishing the desirable from the undesirable book by committee of pupils under the teacher's guidance.

l) Individual and small-group activities in making illustrations of books read.

6. Are checks, tests, or required reports advisable?

All activities related to individual recreative reading should be upon a voluntary and pupil-choice basis rather than upon the basis of requirement and assignment.

"There should be no questioning or quizzing of the children by the teacher concerning what has been read. . . . . They should be encouraged to make comments on the selection, to tell about the things that caught their interests. . . . . There must be no forced comments, no probing, no quizzing, and no insistence upon verbal reactions. Merely give the children a chance to tell what they wish to tell. . . . . We must get away from the idea that no learning can go on unless

teachers are asking questions and children are answering them" (*Reading and Literature in the Elementary School* by Paul McKee, p. 520).

Book reports should practically always be oral. Pupils should be encouraged to tell classmates about new books read. If book reports are to be written, they must never be assigned in terms of a certain book, a certain form, or a certain number of words. Written reports of any value include only such matters as the author's name, the title of the book, the publisher, a few comments concerning the content, and reasons for liking or disliking the book.[1]

The following is a set of guiding principles in another form.

A SELF-EXAMINATION

a) Am I able to get the children interested in voluntary reading for fun with very few or no exceptions?

b) Am I able to learn the reading interests of the individual children and discover those whose reading is limited largely to undesirable types of reading?

c) Am I successful in substituting desirable books for undesirable books in the children's voluntary reading?

d) Am I successful in widening the reading interests of those whose reading is limited to only one type?

e) Are the children acquiring the habit of recreative reading during leisure time?

f) Do I depend mainly upon intrinsic interest or mainly upon devices dependent upon derived interest?

g) Do I fully utilize available sources for obtaining suitable books for the children?

h) Am I resourceful in stimulating and guiding the children in utilizing available sources for obtaining books?

i) Do I avoid keeping an unduly long time library books unsuitable for actual reading by pupils who have not read them?

j) Am I skilful in guiding children in the voluntary selection of books suitable as to difficulty?[2]

WORK-TYPE AND PRACTICE READING (SILENT)

The specific objectives involved in this phase of the whole problem of reading instruction are indicated in various connections in the new yearbook on reading, but there is little or no treatment of the matter of method or of guiding principles in this type of instruction.

The teacher should consider first the essential prerequisites to effective practice. If the practice is to be effective, there must be

[1] *Teacher's Guide and Course of Study in Reading, Grades One to Six*, pp. 38–39. San Jose, California: San Jose School Department, 1935.

[2] *Ibid.*, p. 40.

a specific purpose or a definite goal in the mind of the child. The aim might be to improve one or more of the types of reading based on specific purposes of the reader which are discussed on pages 33–35 of the new yearbook or to improve one or more of the functions listed on pages 362–66. It might be to increase the rate on the part of slow readers or accuracy on the part of the careless readers or to balance rate and accuracy. The aim might be one of Horn's classes of abilities in study reading (comprehension and evaluation, location, organization, and remembrance) or one of Gates's four main functions (general significance or impression, prediction of outcome, accurate reading of precise directions, and noting details).

Keen interest on the part of the child is another essential to effective practice. If the child has a genuine purpose for his practice, he is likely to be interested in the practice. If his deficiency has been revealed to him in an objective fashion and the road to improvement made clear, a strong motive is thereby provided. To maintain keen interest, however, requires an adequate amount of success and encouragement. The keeping of objective records of progress, with definite goals in mind, aids greatly in insuring keenness of interest and a strong motive on the part of the child.

Suitable material of high interest which has been especially organized for practice of a particular type is another essential prerequisite. Such material may now be found in general textbooks in reading and in greater amount in special series of work-type readers and practice booklets.

While recreational reading is best taught by informal procedures, the practice-type of instruction that is most effective is more or less formal or standardized. There is a tendency today to go to an undesirable extreme in avoiding any indication of formality. School people generally appear to have developed a complex against using a textbook in regular order even if it has been designed for systematic practice. Too often teachers pay no attention to the real function of work-type, practice materials in silent reading, disregard the author's suggestions as to procedure, and use the material ineffectively. Only recently the writer observed a class of children taking home a printed practice booklet in silent reading designed for use in supervised-practice periods only. Evidently their teacher did

not understand the first principles of method in conducting practice in silent reading.

If the practice is to be most effective, it is highly important to use a procedure adapted to the type of exercise and to the specific objective. If speed is a main aim or if a proper balancing of speed and accuracy is involved, a time pressure in the form of a time limit or a time record is important. On the other hand, in the improvement of many phases of reading, a time pressure is not required and is not desirable. For developing accuracy, power of comprehension, interpretation as to general significance or impression, organization, grasp of details, and the like, unspeeded exercises are preferable. Expertly organized materials are usually accompanied by expertly formulated suggestions of method, and the teacher will do well to try the standardized procedure indicated.

GROUP INTERPRETIVE READING

The classification of reading activities and lessons into work-type and recreational reading has certain serious disadvantages. While some of the reading activities are clearly recreational and some are clearly of the work type, others represent a blending and stand midway between those distinct types. The phrase "the study of literature" is a familiar expression and implies a work-type attitude. Yet it is generally agreed that literature should be approached, read, and enjoyed in a recreational mood.

The group reading of stories, poems, and other literary selections from reading textbooks with the same book in the hands of all the members of the group should not be overdone to the neglect of other types of reading activities, but this instructional procedure has distinct functions and values in reading instruction. Too often it is conducted on a work-type basis with material much too difficult for the children. Yet it cannot be conducted with the greatest profit on a purely recreational basis, as in the case of individual reading. It represents a distinct type of instructional activity in between the purely work-type and the purely recreational.

The following is a brief guide to teachers representing a consensus of the best authorities on the subject.

Main functions of group interpretive reading.—The primary purposes of group interpretive reading are (1) to provide for community

of feeling and experience; (2) to enrich and widen experiences; (3) to develop permanent, varied, and worth-while interests in reading; (4) to induce interests in voluntary independent reading of desirable material; (5) to develop interpretive powers; (6) to elevate tastes and increase appreciation of material of relatively high literary merit; and (7) to promote co-operative activities related to interpretation.

Reading is an invaluable means of experience. Group reading is distinguished from individual, independent reading by the community of experience involved and by co-operative interpretation. The interplay of the members of the group under the guidance of the teacher provides opportunity for broadening the interests of the children. Fortunately, a type of procedure resulting in a love for reading and in the fullest realization of the experience values is also the procedure best adapted to the development of fluency in reading.

Secondary functions.—The subordinate aims in group recreative reading are (1) to further vocabulary growth; (2) to develop fluency, accuracy, and natural expression of the meaning in oral reading; (3) to provide favorable conditions for growth in rate of silent reading; (4) to cultivate the imagination; (5) to inculcate fundamental behavior ideals; and (6) to foster appreciation of classical literature suitable in difficulty and interest.

The approach.—The main function of the preparatory or approach step is to insure readiness in terms of a sympathetic attitude, eager anticipation, and background. Brief approaches are usually more effective than those which are long drawn out. Fact-burdened, time-consuming approaches often defeat their main purpose. Many times an attractive title and an illustration that arouses curiosity are adequate to produce readiness to read a selection.

Extensive versus intensive method.—In the traditional method of teaching, with literary selections as the reading material, the procedure was usually a slow, laborious, highly intensive, analytical method, attention being centered mainly on oral reading, details, and word meanings. The best authorities are now agreed that the extensive method is more suitable for use with literary materials. Research studies also show that it is more effective than the intensive method.

Under extensive methods a much larger amount of material is read than under intensive methods. After a brief effective approach, the next step is usually the individual silent reading of the selection to obtain a general impression and an enjoyable experience. If this reading is done during a study period, each child, on completing the selection, would consider the problems following the selection and do such re-reading as he deems advisable. In place of the individual silent reading of the selection, oral reading in class, with the children taking turns, is appropriate in the case of selections with prominent auditory values, dramatic elements, or conversation. During the class period the pupils will engage in various types of activities, including the discussion of questions or problems raised by members of the group or of those following the selection in the textbook.

Method of the whole versus the method of details.—The principle of the method of the whole is a corollary to the principle of the extensive method. Instead of proceeding in an intensive fashion with attention centered on detailed questions and meanings and perfected oral reading, the procedure is in terms of the whole selection or large sections, in terms of major values and main points. The problems or the interpretive questions deal with the story as a whole or with significant points. There is never consideration of details except in relation to major values. In such a method oral reading is used merely as an aid in co-operative interpretation.

Creative realization rather than analysis.—The approach to literature for real experience and enjoyment must never be analytical and critical. It must always be co-operative and creative. In the group reading and related activities the children, under the teacher's guidance, are attempting to re-create in terms of their own past experiences the pictures, the sounds, the feelings, the ideas, and the ideals which the author has embodied in the story.

Informal rather than formal.—Informal spontaneous reaction to a story or an incident is often far more effective than the formal answering of a long list of questions. Pupils should be encouraged to contribute ideas, to suggest questions for discussion, and to plan related activities. Initiative and enthusiasm are the natural outcomes of an informal procedure in contrast to perfunctory passive activities in a formal method.

Vocabulary preparation.—One valuable means of vocabulary preparation is the oral use, during the approach step, of words likely to be stumbling blocks to meaning or recognition. In some cases another means is provided in the vocabulary preparatory exercises in the readers and the workbooks, which introduce the new words in a meaningful setting.

Motivating questions and activities.—Often the mere interest in the story is sufficient. Community of experience and co-operative interpretation are furthered by motivating questions centering in the more significant relationships. The children are thereby stimulated to think, and broader interests are aroused. If children are going to dramatize a story, they have a stimulating, unifying problem, accompanied by the many subsidiary problems arising. Details are considered in relation to the whole. The expressional activity is essentially recreative.

Varied procedures as to oral and silent reading.—There are various possible procedures in the group reading of stories, a few of which will be briefly described.

1. The story may be read silently by all the children in the group under the observation of the teacher or independently while the teacher is busy with another group of children. In the former case the teacher gives any assistance and guidance needed by individual children. Then follows spontaneous reaction or discussion of problems set in the approach, printed at the end of the selection, or raised by pupils or teacher. Oral reading should be incidental as an aid in co-operative interpretation, in support of a judgment, or as an illustration of a point.

2. The procedure might be that of sight oral reading, the children taking turns. Motivating questions could be used throughout, and discussion and spontaneous reactions interspersed between readings. A unifying problem with subsidiary problems is valuable in preventing the procedure from becoming a scrappy consideration of details. Questions and discussion may be minimized, and interest may be centered on the plot, the sequence of incidents, and the outcome.

3. There might be stretches of silent reading with reactions, including oral reading following the silent reading.

AUDIENCE READING

The new yearbook on reading contains a very good chapter on the improvement of oral reading. New helpful material is introduced, and special emphasis is placed on audience reading. Various textbooks in method also devote space to the subject. The following material was formulated by the author in co-operation with a committee of teachers working out a course of study in reading.

1. What conditions are essential to a real audience situation?

a) A person or persons entirely dependent upon the reader for the thought of unfamiliar material, as a rule.

b) Attention on the part of the audience.

2. Should the material be mainly assigned or pupil-selected?

The material should be pupil-selected but approved by the teacher.

3. How provide for practice by one group in preparation for reading to other pupils?

a) Where the group is to read to the pupils of another room, the practice may be a part of the regular class work.

b) Where the group is to read to the other pupils of the room, a leader or captain may be arranged for and the practice carried on in some appropriate place outside the room.

c) The class or room of pupils may be divided into groups with a leader for each. Leader assigns part each is to learn and hears practice. Teacher may help by going from group to group.

d) Pupils may be encouraged to practice at home.

4. What is the most effective way to make the unsuccessful reader conscious of a need for improvement?

If the reader does not read so the audience can hear or understand, ask the children if they can hear the reader, or if they can understand what is being read. The negative response will be likely to awaken the reader to a need for improvement.

5. How may a teacher most effectively guide the child in improving his audience reading?

After a felt need is aroused, the specific cause or causes of failure may be pointed out at once if it can be done without undue delay or embarrassment or later in private if that seems advisable.

6. What types of materials are most appropriate for audience reading?

a) Most any material that is likely to interest the audience is appropriate except objectional jokes and material seriously lacking in literary merit.

b) Dramatic readers, books of poetry, and books with short independent story units are best for group-to-group audience reading.

c) Interesting selections from discarded books or magazines may be cut into sections and distributed to the members of a group.

d) Pupils may collect selections especially appropriate for a particular holiday or theme of immediate interest.

7. How to solve the problem of providing opportunity for every pupil to participate in the audience reading reasonably frequently, say once or twice a month?

a) Have a weekly period for audience reading.

b) Manage the audience reading so that each pupil will read a relatively small amount, thereby allowing a third to a half of the pupils to read each week.

8. How develop judgment on the part of the child in selecting material of proper difficulty, and of interesting and suitable content?

a) By having brief reactions from the audience as to the interest appeal and the reasons for the responses as to the interest appeal.

b) By letting the child fail on too difficult material and then bring out the cause of the failure.

9. Is audience reading recreative or work-type activity?

Recreative by all means.

10. Should the audience be asked to criticize the reader?

a) "Kindly, constructive criticism by the group tends materially to improve the quality of oral reading. Criticism of all the oral reading done by the children is unnecessary, but it should take place often enough to make them keep in mind certain standards and to help those who really need group criticism. The teacher is able to check unfair and unkind criticism, to emphasize the points that are true, and to stress the significant points. In the beginning the criticism is based upon the interesting way in which the material was read. . . . . Later the children may speak of the voice, the posture, and the smooth reading, and, as has been explained, may make comments on the material selected" (*Reading Activities in the Primary Grades*, by Storm and Smith, p. 204).

b) It is better to have no direct criticism than for the children's main interest to become centered upon points of criticism rather than upon the content and experience.

c) There should be no direct criticisms of the child who is oversensitive or who tends to become nervous.[1]

REMEDIAL INSTRUCTION[2]

Since the new yearbook contains a chapter by an eminent authority on diagnosis and treatment of extreme cases of reading disability and since the subject is discussed extensively in a number of new

[1] *Teacher's Guide and Course of Study in Reading, Grades One to Six*, pp. 47–48. San Jose, California: San Jose School Department, 1935.

[2] For a further discussion of these major types of instructional activities in reading, see: (*a*) Clarence R. Stone, *Better Primary Reading*, pp. 353–98. St. Louis, Missouri: Webster Publishing Co., 1936; (*b*) Clarence R. Stone, *Better Advanced Reading*, pp. 125–265. St. Louis, Missouri: Webster Publishing Co., 1937.

textbooks on methods in reading, the treatment here will be confined to a summary of basic principles in remedial instruction in reading.

The following are the essential guides for the remedial teacher of poor readers.

1. Make a careful study of the learning capacities and idiosyncrasies of the child, of the nature and the extent of his deficiencies in reading, of the special difficulties and the types of errors or weaknesses in both silent and oral reading, and of possible causal factors operating.

2. Begin with material that is interesting to the child and that is relatively easy in order to restore confidence and obtain success —an essential to satisfaction and enjoyment.

3. Assume an attitude of enjoyment and encouragement to the child.

4. Adapt the instruction to the particular needs of the child as shown in the diagnosis, carrying parallel lines of specific practice and reading for pleasure.

5. Provide objective records of progress for your own information and for the child's motivation and satisfaction.

6. When the child reaches a satisfactory level in a particular type of practice, increase the difficulty of the material and provide a new progress record.

7. Abandon any material or technique which does not, within a reasonable time, yield sufficient improvement to provide satisfaction.

8. Provide a liberal time allowance for practice, but distribute and vary the practice so as to prevent fatigue or a lag of interest. Avoid any other unpleasant experiences.

9. Make a continuous study of the child's particular difficulties, errors, and successes throughout the practice.

10. In addition to the daily progress records, measure progress periodically by the use of standardized tests, employing different forms of the same test in each case insofar as is possible.

THE COMPARATIVE VALIDITY OF THE METROPOLITAN READINESS TESTS AND THE PINTNER-CUNNINGHAM PRIMARY MENTAL TEST

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The Metropolitan Readiness Tests[1] were devised for determining the extent to which pupils are ready to do the work of the first grade and for providing a diagnosis of the difficulties revealed. To date, little has been published concerning the experience of school workers with this test as a means of predicting later success in learning first-grade skills for beginning pupils, and little is known about how this new measure compares with available intelligence tests as a means of determining the readiness of beginning pupils for school work. An earlier study[2] showed that the Metropolitan Readiness Tests and the Pintner-Cunningham Primary Mental Test yield ratings which are closely correlated. The present study attempts to evaluate the Metropolitan Readiness Tests in terms of how well they predict later progress in reading. Comparable data are given for the Pintner-Cunningham Primary Mental Test.

For purposes of the present study data were secured for 260 pupils enrolled in three public schools in Cincinnati, Ohio. In September, 1935, the Metropolitan Readiness Tests and the Pintner-Cunningham Primary Mental Test were administered to the entire first grade in each of these schools. All these pupils were used in this study with the exception of a few pupils who transferred to other schools during the two years following the testing. At the time of testing, 227 of the 260 were enrolled in the first grade for the first time, and the remainder were repeating the grade. The median chronological age of

[1] Gertrude Hildreth and Nellie L. Griffiths, Metropolitan Readiness Tests. Yonkers-on-Hudson, New York: World Book Co., 1933.

[2] Albert Grant, "A Comparison of the Metropolitan Readiness Tests and the Pintner-Cunningham Primary Mental Test," *Elementary School Journal*, XXXVIII (October, 1937), 118–26.

the 260 as of September, 1935, was six years and five months. On the Metropolitan tests the median of the total scores was 71.3, which, according to the test manual, corresponds to a percentile rank of 41 for first-grade pupils. The median of the intelligence quotients on the Pintner-Cunningham test proved to be 92.9. These medians are somewhat below the corresponding medians for the entire first grade in the Cincinnati public schools. They are likewise below the medians for first-grade pupils in the country as a whole.

In May, 1937, a check was made of the educational progress achieved by the 260 pupils during the two school years which had elapsed since they took the Metropolitan and the Pintner-Cunningham tests in September, 1935. In terms of grade placement it was found that thirty-eight were still in the first grade and that all others were enrolled in the second grade. Objective information as to the achievement of the pupils in reading was secured by means of standardized reading tests given to the entire group, including repeaters. The Gates Primary Reading Tests, Types 1, 2, and 3, were used in two of the three schools. These tests proved to be too easy for a few of the children, as evidenced by the fact that they achieved maximum scores. To all pupils with such scores were given the Metropolitan Achievement Tests, Primary 2, Form A, Reading, since this test is applicable at a higher level of achievement. In the third school the Metropolitan Achievement Tests, Primary 1, Form B, Reading, were used except in a few cases where in the judgment of the school this reading test was too difficult. Such pupils were given the De Vault Primary Reading Test, Form 1.[1] In the case of all pupils who took two tests, an average of the two resulting ratings was used as the child's score.

Since the Metropolitan Readiness Tests were devised as a measure of readiness for first-grade work, it follows that achievement in primary reading constitutes at least a partial criterion of the validity of the readiness tests. For this reason the scores on the reading tests already described were used in this study as a criterion for determining the validity or predictive value of the Metropolitan Readiness Tests. No attempt was made in this study to evaluate the validity

[1] Nellie M. De Vault, De Vault Primary Reading Test. Los Angeles, California: Psychology and Educational Research Division, Los Angeles City School District.

of the tests as a means of diagnosing the specific instructional needs of first-grade children. It is recognized that the results of these reading tests do not constitute a wholly adequate criterion of success in acquiring first-grade skills. Although reading is a major part of the work of the first two grades, other skills are also taught at this level. Furthermore, the tests used do not measure all aspects of reading. It is recognized that the findings reported in this study are subject to certain limitations due to the nature of the data used.

Table 1 makes possible a comparison of the Metropolitan Readiness Tests given in September, 1935, and the reading tests given in

TABLE 1

SCORES OF 260 PUPILS ON METROPOLITAN READINESS TESTS GIVEN IN SEPTEMBER, 1935, AND SCORES OF SAME PUPILS ON READING TESTS GIVEN IN MAY, 1937

Score on Metropolitan Readiness Tests	Number of Pupils	Median Grade Score on Reading Tests
90 and above	42	3.3
70–89	93	2.7
50–69	81	2.2
Below 50	44	1.4
All pupils	260	2.4

May, 1937. It shows, first, the number of pupils whose readiness scores fell within each of four intervals and, second, the median grade scores in reading for the pupils in each interval. For example, pupils with readiness scores of 90 or above achieved a median grade score of 3.3 on the reading tests, whereas pupils with readiness scores of 70–89 achieved a median grade score of 2.7. In general, the table shows that pupils who did well on the readiness tests also did well on the reading tests given nearly two years later. There was, however, considerable overlapping in the reading achievement of pupils with different degrees of readiness. For example, six of the forty-two pupils with readiness scores of 90 or above made scores *below* the second-grade level on the reading tests, and seven of the forty-four with readiness scores below 50 made scores *above*

the second-grade level on reading tests. In other words, a high readiness score alone does not always assure success in reading, and a low readiness score does not always mean failure.

Table 2 gives for the Pintner-Cunningham test the same type of information as is given in Table 1 for the Metropolitan Readiness Tests. Thus, pupils with mental ages of seven years or above on the Pintner-Cunningham test given in September, 1935, made a median reading grade of 3.4 and those with mental ages of six years through six years and eleven months made a median reading grade of 2.6.

TABLE 2

MENTAL AGES OF 260 PUPILS ON PINTNER-CUNNINGHAM PRIMARY MENTAL TEST GIVEN IN SEPTEMBER, 1935, AND SCORES OF SAME PUPILS ON READING TESTS GIVEN IN MAY, 1937

Mental Age (in Years and Months) on Pintner-Cunningham Test	Number of Pupils	Median Grade Score on Reading Tests
7–0 and above.....	50	3.4
6–0 to 6–11.....	87	2.6
5–0 to 5–11.....	93	2.1
Below 5–0.....	30	1.5
All pupils.....	260	2.4

As in the case of the Metropolitan Readiness Tests, there was overlapping in the reading achievement of pupils with different degrees of mental maturity. Thus, of the fifty pupils with mental ages of seven years or above, two made scores *below* the second-grade level in reading, and seven of the thirty with mental ages below five years made scores *above* the second-grade level in reading.

The correlations between the Metropolitan and the Pintner-Cunningham tests and the reading tests are shown in Table 3. The correlation between the Metropolitan Readiness Tests and the reading tests proved to be $.64 \pm .025$. This coefficient indicates that the Metropolitan tests measure factors definitely related to later success in reading. For the Pintner-Cunningham test the coefficient of correlation with the reading tests is $.63 \pm .025$. It would appear, there-

fore, that the two tests are about equally valid as measures for predicting later achievement in reading. It is of interest to compare these coefficients with those usually found between group intelligence and achievement tests. Pintner[1] reports such coefficients to be usually between .30 and .60. It follows that the relation between the Metropolitan Readiness Tests and later progress in reading is fully as close as the relation usually found between educational achievement tests and intelligence tests.

TABLE 3

CORRELATIONS BETWEEN SCORES ON READING TESTS AND (1) SCORES ON METROPOLITAN READINESS TESTS AND (2) SCORES ON PINTNER-CUNNINGHAM PRIMARY MENTAL TEST FOR 260 PUPILS

Reading-Test Scores Correlated with—	Correlation
Metropolitan Readiness Tests:	
Total score	.64 ± .025
Test 1 (Similarities)	.48 ± .032
Test 2 (Copying)	.49 ± .032
Test 3 (Vocabulary)	.41 ± .035
Test 4 (Sentences)	.38 ± .036
Test 5 (Numbers)	.54 ± .030
Test 6 (Information)	.46 ± .033
Pintner-Cunningham test:	
Mental age	.63 ± .025

Table 3 also gives the coefficients of correlation between the individual sections of the Metropolitan tests and the reading tests. These coefficients range from .38 ± .036 for Test 4 (Sentences), to .54 ± .030 for Test 5 (Numbers). These correlations suggest that each of the six individual test sections measures factors related to later success in reading. The fact that Test 5 (Numbers) gives a higher correlation than any of the other subtests is probably due to its being a good measure of mental maturity. This conclusion is supported by the results of an earlier study,[2] which showed a higher

[1] Rudolph Pintner, *Intelligence Testing*, p. 267. New York: Henry Holt & Co., 1931 (new edition).

[2] Albert Grant, *op. cit.*, p. 121.

coefficient of correlation between Test 5 and an intelligence test than was found to obtain between any of the other subtests and the intelligence test.

Since some of the Metropolitan subtests give rather low coefficients of correlation, it is probable that the elimination of one or more of the individual tests would not reduce materially the correlation between the total score for all six of the tests and the reading-test scores. For example it was found that a total score based only on Tests 1, 2, and 5 gives a coefficient of .61 ± .026, practically the same as the coefficient found when all six tests were used. Additional information on this point could be secured through computing the coefficients of correlation between the criterion scores and various combinations of the six individual tests. However, it is felt that the limited criterion of validity used in this study would make such an analysis difficult to interpret and of doubtful value.

SUMMARY AND CONCLUSIONS

This study attempts to give significant information concerning the validity of the Metropolitan Readiness Tests as a means of predicting success in reading. For this purpose these tests were administered to 260 first-grade pupils, and the ratings achieved were compared with the scores of the same pupils on standardized reading tests given approximately two years later. The ratings of these pupils on the Pintner-Cunningham Primary Mental Test were also compared with their reading-test scores in order that some notion might be gained of how the predictive value of the Metropolitan tests compares with the predictive value of group intelligence tests applicable at the primary level. An analysis of the data described suggests the following tentative conclusions:

1. The Metropolitan Readiness Tests when applied to first-grade pupils measure factors which are significantly related to later success in reading skills. The relation between the Metropolitan tests and later achievement in reading is fully as close as the relation usually found to exist between intelligence tests and tests of achievement. The Metropolitan Readiness Tests are on a par with the Pintner-

Cunningham Primary Mental Test in providing a basis for predicting later achievement in reading.

2. All the six individual test sections making up the Metropolitan Readiness Tests measure factors which to a somewhat varying degree relate to success in reading. Test 5 (Numbers) seems to yield the best prediction.

3. Ratings based on a combination of individual Tests 1, 2, and 5 yield a prediction of success in reading practically as good as the prediction resulting when all six subtests are used. However, any attempt to determine the relative validity of the individual test sections which make up the total battery should involve a more adequate criterion of success in acquiring first-grade skills than was used in the present study.

HERESY IN HANDWRITING

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During the past five years I have been conducting experiments in a number of cities in the diagnostic teaching of handwriting. Everywhere I have gone I have found handwriting the worst taught, the most neglected, and the least understood subject in elementary school. It is the only fundamental subject generally untouched by diagnostic work. Both teachers and pupils are in a chronic state of discouragement; both know perfectly well that essentially no progress is being made in spite of daily practice which seems as monoto-

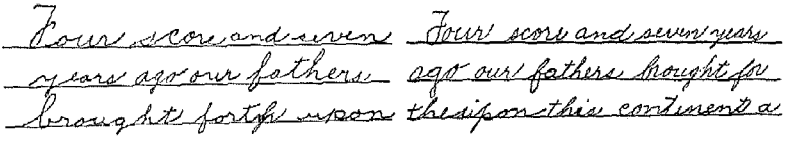

FIG. 1.—Samples (reduced one-half) of qualities 40 and 60 on Ayres Handwriting Scale.

nous and pointless to one as to the other. The meager gains made under current methods of instruction are almost incredible. According to the Ayres norms, based on thousands of cases, the average pupil requires *seven years* to improve from the first to the second sample shown in Figure 1. The difference in quality is discernible, but it is certainly not enough to warrant the 350 hours of practice that have intervened between the two levels of accomplishment. In no other subject do children make so little progress.

In the course of my experimentation in the teaching of handwriting, more than twenty classes have been taught diagnostically. I taught two of them; teachers under my supervision taught a dozen others; and the remaining classes used my exercises, the teachers simply following the manual of directions. The results were practically uniform. Every class gained in one semester from two to four years, as measured by the Ayres scale. In a year's time not more

than 5 per cent of the pupils in any class were writing below "quality 60" on this scale, and all class medians were between 65 and 72. Classes ranged from high-second to high-fifth grade, and the results were equally good at all levels. Samples of the best, the average, and the poorest writing, with ink, in an ordinary class of forty-six third-grade pupils at the end of one semester of diagnostic teaching are shown in Figure 2.

I have gone into some length to present data about my work because I want to make my own position clear before I begin to criticize others. I do not wish to be accused of being an ignoramus about

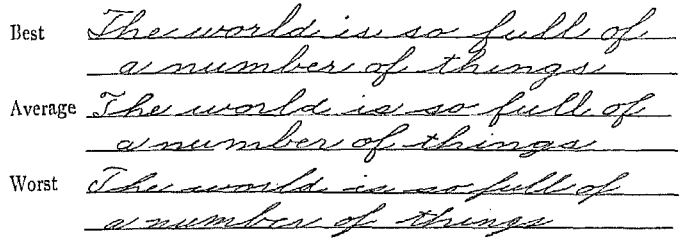

FIG. 2.—Best, average, and worst specimens of writing (reduced one-half) in a class of forty-six low-third-grade pupils at the end of one semester of diagnostic teaching.

handwriting—a mere professor who can talk in generalities but who cannot teach penmanship as well as the poorest elementary-school teacher.

FALSE ASSUMPTIONS ABOUT HANDWRITING

There is, then, abundant evidence that handwriting does not have to be learned at a snail's pace. The question at once arises why it usually is. The answer lies, I believe, in the amount of perfectly appalling nonsense generally believed by teachers. Certain fundamental concepts have become so much a part of tradition in this subject that they are accepted as the law and the gospel. These hypotheses absorb the average teacher's attention, block the acceptance of any nonconforming idea, and control the direction and nature of his teaching. Indeed, on them are based all present-day systems of instruction. It is my contention that most of these assumptions are false. In order to make my meaning clear, I shall discuss seven basic tenets of current handwriting "religion."

1. *A teacher must herself be an expert writer.* This is nonsense. Unlike other subjects in elementary school, handwriting involves muscular skill, not the accumulation of ideas or the development of attitudes. It is, therefore, less related to the other subjects than to every other kind of muscular learning—swimming, skating, boxing, fencing, diving, dancing, playing tennis, playing golf, and so on. If the statement given above about handwriting were true, then the Channel swimmer would be the best possible teacher of swimming, the Davis Cup player would be an expert tennis coach, the world's champions could teach boxing, and the *première danseuse* would be an instructor par excellence in the ballet. Any follower of any sport knows that the expert is rarely able to teach at all. Instead, the best teachers are usually only average performers; some famous coaches have never even played the game that they coach. Indeed, the main difference between an expert performer and an expert teacher is that the former does not know what makes him superior and the latter does. It is quite as ridiculous to say that a teacher must write well before he can teach others to write as it would be to say a track coach must jump six and a half feet before he is allowed to teach high jumping.

Far from believing that a teacher must write well before he can teach well, I am convinced that the exact opposite is the case. The good writer simply does not know how he executes his movements. The poor writer knows, or can easily find out by observing himself, what makes bad writing bad. My writing is a case in point. My script varies from average to poor; it rambles all over the page and has neither uniform size nor consistent slant; its only merit is that it is usually legible. The only things that I can illustrate convincingly are errors. I am, in short, a horrible example. None of this ineptness has any relation to my ability to analyze what a child has written, study his methods of production, locate his errors, show him what is wrong, and guide his remedial instruction. Indeed, my own errors are of untold value in helping me teach children; I know why they make mistakes because I know why I make the same mistakes. Wherever I arrange for experiments I always ask to have assigned to my work teachers who are poor writers. The last thing I want is an expert.

2. *All writing that the children see on the board must be perfect.* This is more nonsense. If I stand in front of a class, tell them in a loud voice three times to look at the blackboard, rebuke five of them for inattention, tell Johnny to stop cleaning his desk, suppress two chronic whisperers, and tell Mabel to turn around, I am usually able to persuade most of the children to observe what is written on the board. If I do not go through such exhortations, only a dozen will even look in the right direction. It is hard to explain how children can be influenced by what most of them do not even see.

Within the past few years I have made some simple investigations to determine how much children notice of what is written on blackboards. At the end of a semester I asked 253 pupils a series of questions about the characteristics of their teachers' handwriting. Not over 41 per cent were able to answer any question correctly. Last year there were 286 pupils who had seen my script repeatedly, some of them daily. In my absence their teachers asked them a series of questions about my writing. There is no doubt that these teachers made earnest inquiry because they had been appalled at my lack of style. Not a single child had ever noticed that I wrote badly. Of the 286 pupils, 259 thought I wrote as well as, or better than, their teachers; my blackboard performance is around 40 on the Ayres scale, whereas the teachers rarely produced anything below 70.

Unless children absorb handwriting, like sunshine, through their pores, it is absurd to suppose that any educational end is served by requiring teachers to labor by the hour putting faultless writing on blackboards; nobody except supervisors, principals, and the recording angel will credit it. The uncritical eye of the small child will not even recognize the script as good. If teachers spent less time writing and more time teaching, the children would learn faster.

3. *All writing must be done by an arm-movement.* The clearest proof of absurdity in this statement is the fact that only teachers write with such a movement. Any observant person can spot an elementary-school teacher the moment he takes his pen in hand. The general public writes with a combination of fingers, hand, and wrist. Generations of teachers have taught arm-movement to generations

of pupils, among whom possibly 2 per cent use this method of production as adults.

The arm-movement—as it has been explained to me by experts—consists essentially in the use of the arm both to carry the hand across the page and to form the letters; the fingers are not bent, although the tips assist a little in guiding the pen point; the wrist is flat on the desk and is held rigid. There are two techniques that are much more frequent. One is to use the fingers almost exclusively, working them back and forth to form the letters. This method is objectionable because the fingers soon become fatigued and the writing illegible. The other technique consists in turning the hand toward the right, using the arm to carry the hand across the page, keeping the fingers straight, guiding the pen with the fingertips, but moving the hand—as a unit—back and forth from the wrist. The essential difference between this and real arm-movement is that in the former the main motion comes from the wrist whereas in the latter it comes from the elbow and the shoulder. There is little to choose, in efficiency, between the two. It is hard to see why wrist-movement should be banished into outer darkness while arm-movement enjoys such an odor of sanctity.

Even if arm-movement were the best possible technique for writing, it does not in the least follow that all children should be taught to use it. I am reminded of the situation that confronts a swimming coach when a beginner comes for instruction. Shall the coach start the pupil on the hardest but most efficient stroke, knowing that years will be needed to perfect it? Or shall he start with an easy but less efficient stroke that can be brought to a high level of usefulness in a year or two? If he decides on the harder but more effective method, he always runs the danger that his pupil either will stop before proficiency is reached or will find the stroke so difficult that he cannot make any real progress. The same situation confronts the teacher of penmanship. He can try to develop an arm-movement, if he believes that to be the best technique, but he should realize that 95 per cent of the pupils will never gain efficiency in using it; or he can teach a wrist-movement which can obviously be learned by 95 per cent of the pupils, since about that proportion of adults use it. Arm-movement may be the thing for the expert but children are not experts.

I have recently been working in a city in which arm-movement is a fetish. From the day a child walks into the first grade until he is graduated from the sixth grade, he has one point dinned into his ears: he must write by moving his arm, not his wrist or his fingers. The results are interesting and show what happens when children try to learn something that is too hard. They promptly simplify it into something that they can learn. The predominant style in this school system is illustrated by the carefully copied sample shown in Figure 3. It is regular, it has rhythm, it has perfect slant and almost perfect alignment—in short, all the virtues claimed by the advocate of arm-movement—but I defy anyone to read it. This script is not an exaggerated or an isolated example. It is the

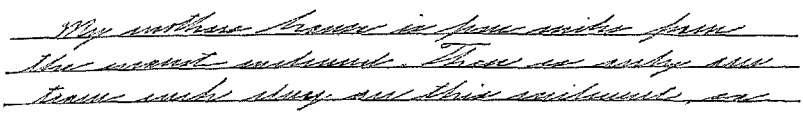

FIG. 3.—Sample of handwriting (reduced one-half) indicating good arm-movement but without adequate letter formation.

average result of six years' concentrated drill on arm-movement given to pupils who are not old enough to learn it.

The fundamental fact is that pupils do not learn to control an arm-movement. At the end of their elementary-school years most of them show a partially learned motion that is neither one thing nor another; this half-learned technique soon breaks down under the pressure of junior high school and high-school work.

4. *No "fine" writing can be done with a fountain pen.* This statement is all the more misleading because, in one sense, it is true. If one is talking about an adult expert, it is evident that he does his best work with a fine, stiff, steel pen. In this article I am talking about elementary-school children. It would be nearer the truth to say that only with a fountain pen can a child approach fine writing.

The question of which implement children in which grades should use is perennial. Writing with a pencil is admittedly informal and —what is much worse—unsatisfactory from a practical standpoint. If the pencil is hard, the writing can hardly be read; if it is soft, the letters promptly smear. On the other hand, pen and ink are the twin demons of the penmanship period. Even an adult finds them

hard enough to control. Moreover, writing with pen and ink is about as essential a skill as the ability to add a column of twenty four-place numbers. It cannot be denied that an individual occasionally has to add such a sum, but the experience is not common enough to warrant spending a year or two of elementary-school time in learning how. One must also sometimes write with pen and ink, but not often enough to justify years of drill. On practical grounds one semester, or at the most one year, of writing with pen and ink at the end of elementary school is sufficient for adult needs. The implement in regular adult use is the fountain pen. It is presumably more sensible to teach children to write well with the type of pen that they will use than to teach them to write badly with a type of pen that they will not use if they can help it.

Furthermore, it is not true that pupils produce fine writing only with pen and ink, for the excellent reason that not one in a hundred produces fine writing with anything. At best, children are only mediocre penmen. Within their limitations of small hands, immature nervous control, and great fatigability, they write best with the implement that makes the least demands on them—the fountain pen. It is even easier to write with a fountain pen than with a pencil because the pen will stay sharp. It is true that the average fountain pen makes a line 0.45 of a millimeter wide while the steel nib leaves a track only 0.13 of a millimeter in width.[1] I remain unconvinced that the difference of 0.32 of a millimeter justifies straining children unnecessarily. The objective of elementary-school work in penmanship should be a legible script, produced at a fair rate without fatigue and with a comfortable and relaxed motion. Handwriting is a tool, not an ornament. The main considerations are comfort and efficiency, not style, which is so rarely achieved by any child as to be utterly negligible.

In one school system I followed the progress of thirty-seven children through three years of ordinary instruction in penmanship. In the low-third grade they wrote with pencil, and only one had a quality below 60 on the Ayres Handwriting Scale, although the script was of course somewhat large. In the high-third grade they

[1] These measurements are equal to eighteen-thousandths and five-thousandths of an inch, respectively.

began to use ink. At the end of the first semester only three children still wrote with a quality above 60. In the four succeeding semesters there were never more than five children—usually different pupils—rating above 60 at any time. At the end of the high-fifth grade their average standing was 45. Anyone who thinks the use of steel pens produced "fine" writing for these pupils is unwilling to face facts. In the meantime all the members of another class of fountain-pen users in the same school had, in a year of diagnostic teaching, reached at least quality 60 and had maintained this level with scarcely any practice. The customary baptism of ink is an ordeal from which few pupils completely recover.

5. *No child ever has enough practice in handwriting because he can still improve.* As an abstract argument this statement is unassailable, but as a working hypothesis it is deadly. There must be a point beyond which practice is unnecessary, partly because the level reached is good enough for daily use and partly because the time needed for further development could be better spent on something else. The effect of this policy on good writers is nothing short of devastating. For instance, Mary Jane starts a year with a quality of 70 on the Ayres scale. Each day she writes beautifully. Her reward? She gets a chance to do the next day's work just like anyone else. Beside her sits Billy whose daily scrawl would not rate higher than 20. Does he get any penalty for poor work? No, he merely writes the next day's assignment—even as Mary Jane must do. After a while it occurs to even an immature mind that something is wrong. Mary Jane's work starts to slump, and Billy's gets no better. Before the just and the unjust stretch out the years of practice, without high spots, without rewards, without end. If children were not lamentably weak in reasoning, no good writer would stay good and no poor writer would improve, under such conditions.

6. *In the primary grades the loop letters should be twice as high as the small letters; in the upper grades they should be three times as high.* This is sheer insanity. In the first place, either the alphabet is a given size, or it is not. In the second place, a proportion once learned is rarely relearned. Children who make an *l* twice as high as an *e* for the first three grades will not unlearn what they have already practiced thousands of times and begin to make an *l* three times as

tall. Teachers in the third, fourth, and fifth grades struggle, in vain for the most part, to make children stop doing what teachers in the first three grades have just finished training the pupils to do. When I first discovered this amazing ignorance of the fundamental laws of habit formation, I asked everyone I could find for an explanation. Only one was forthcoming: because of the way in which the penmanship paper was ruled, the writing was too big if the children used three spaces; consequently the powers-that-be simply rehashed the alphabet and decreed that two spaces should be used! Don't supervisors, principals, or superintendents know that it is easier to change paper than it is to change children? All that is needed is some paper with lines somewhat closer together, so that one space can be used for small letters, three for loops above the line, and two for loops below. Then the proportions of the letters would be invariable from the beginning to the end of instruction; the letters would merely have to be made smaller in the later grades. No wonder children have trouble in the upper classes of elementary school when even the alphabet will not stay put.

7. *Quality and speed are inversely related.* That is, a rapid writer writes badly while a slow writer produces a high quality. This assumption is totally wrong. It is quality and *hurrying* that have this inverse relationship. When children put pressure for speed on themselves, their script certainly gets worse. There is a difference, however, between speed and haste. Speed is related positively to quality, because the only way to do anything fast is to do it well—and then one cannot help doing it fast.

Perhaps a few examples from other fields will make this point clear. How, for instance, does a swimming coach develop a sprinter? First, he makes his pupil swim as slowly as possible while he analyzes the stroke and determines just what is wrong. Patiently he sets out to correct each flaw. Never does he allow his pupil to hurry. Never does he time the swimmer or pay any attention whatever to speed. The pupil swims a slow quarter-mile every day, his attention centered on correcting this or that fault. Then, when the stroke is absolutely perfect—and has been perfect for weeks—there comes a day when the coach secretly times his pupil. To the latter's amazement, because he has never tried to swim fast, his rate is phenomenal.

Again, how does a tennis coach teach a player to hit a ball with blistering speed? There is only one method. The pupil hits about twenty thousand balls as *slowly and as correctly* as he can. No attempt at speed is ever permitted during the training. Month after month the pupil concentrates on each detail of movement until his form reaches perfection. Then he finds he cannot help hitting with all the speed he wants.

The lesson from all sports is clear enough. There is only one road to speed in the use of any muscular skill: it lies through the development of perfect, undeviating form. Moreover, nothing kills good form so quickly and surely as hurrying. Far from being inversely related, speed and quality of performance are inseparable. As applied to handwriting this principle means that children should work only for correct form and should never be hurried. They should write at a deliberate rate enough words daily to be the equivalent of the swimmer's slow quarter-mile; it takes thousands of trials before even a simple motion is faultless. If this general policy were followed for the six years of elementary school, the pupils would be at the end not only good but rapid writers.

DIAGNOSTIC TEACHING OF HANDWRITING

The comments made above are admittedly heretical and destructive. I do not, however, wish to convey a wholly negative impression. I obviously intend the reader to know that I think current methods of instruction in handwriting are poor beyond belief. It would, however, hardly do for me to attack the conventional without having something to put in its place. I shall therefore conclude this article with a few comments about my own methods of instruction.

First, the negative items. I do not care in what position the children sit or what movement they use provided they are comfortable and relaxed. I completely ban pen and ink and encourage every child to buy a fountain pen.[1]

[1] Contrary to general expectation, pens from the dime stores are excellent. They are also within the reach of almost any family's purse. The children carry them upside down, drop them, dip them into ink when filling them, walk on them, and generally misuse them, but, out of 130 used under my supervision in a year, only one broke and only one wore out.

With the atmosphere thus cleared, I proceed with a system that has the following six main characteristics.

1. All work is diagnostic. The pupils write simple exercises. It is the teacher's business to diagnose and to give remedial treatment. The arrangement is similar to that of an exercise book in arithmetic. Each child gives himself whatever types of drill the teacher's analysis may indicate are needed. There is no "general" exercise in the entire series.

2. All work deals with letter formation. If every letter is made correctly, the general quality cannot be low. This point should be obvious. If every letter is made correctly, neither can the speed be low. This point has already been discussed. It is the main purpose of the exercises to give drill on each of the twenty-six letters slowly and thoroughly until each is faultless and, then, to allow plenty of time for deliberate use of these letters in writing words and sentences. If the elementary letter habits are correctly and thoroughly formed, the more complex habits needed in producing a running script will develop as soon as the children are old enough to control them. If perfect letter formation is not reached (and it is not by the majority of children under any other system), no satisfactory script can ever develop.

3. In each series the pupils need to learn only one new letter. A single letter appears to children as a "learnable" unit of work. They know, at any given time, what letter they are practicing, what letters they have learned, and what letters remain to be studied. In other words, they feel that their immediate objective is within reach, and they always know where they are with reference to the year's work. To understand why children like these exercises, one has only to compare this exact knowledge to the vagueness that most children show under other methods of instruction.

4. The exercises teach self-analysis. At the end of a semester's work any child in the room can diagnose errors in his own work or in the work of other pupils. A conscientious child does not complain to the teacher, "My writing is bad. What can I do about it?" He says, "The loop on my *y* is sometimes straight and sometimes not, and I can't see what I do that makes the difference. Will you

watch me and tell me?" The former pupil is not likely to improve; the latter certainly will.

5. The only criterion of a pupil's work is legibility. He is free to choose his own slant and style. Any grip on the pen or any position is permitted *provided the pupil is relaxed and the resulting script is legible.* Shaky lines, ink blots, uneven spacing, unevenness of slant, inaccuracies of alignment are never counted against a pupil if the formation of his letters is good. Nervous control will come with age, and his lines will stop shaking. Experience with ink will eliminate the blots. Evenness of slant and of spacing do not contribute much to legibility and are not worth bothering about until after letter formation is perfect beyond any possibility of forgetting. Good alignment will also come if the teacher keeps on hammering about making letters correctly, since one element in good form is to keep them on the line. In any case, a script that is shaky, blotted, and irregular may still be legible, and that is the pragmatic test of any person's writing. I have no special liking for blots, uneven lines, or vagaries of slant, but penalizing children for these defects is simply punishing them for being children.

6. Any pupil is excused from any series of exercises as soon as he writes three exercises that are satisfactory. I encourage every child who can do so to write the first three well, be excused, and get out from under my feet, so that I can have time to diagnose the faults of those in difficulty. The last thing I want in a penmanship class is a group of children who write well, although such a group seems to be the dream of many teachers. I excuse each child as soon as I conscientiously can, place a gold star after his name on a list that I keep posted on the wall, see that he has something else to do, and get to work where I am most needed—with the scribblers and the scrawlers. There is not merely the reward of the gold star for the good writer (although what a child will do to get a star after his name passeth adult understanding) but a more material reward. An excused child may do anything he likes with the extra period or two that he has earned by good work provided he does not disturb other pupils. Every child in the room knows that this freedom is his just as soon as he can write three good exercises. I have

never yet found a writer so poor that he was not excused sometimes. With the lure of freedom just around the corner, handwriting drill no longer stretches into eternity; it stretches only to the third good exercise—and even the dullest can count to three.[1]

Under such a system as I have outlined, the average progress is about three years' normal gain in one semester. Complete ref-

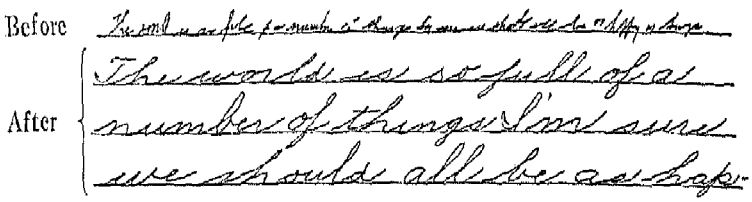

FIG. 4.—Samples of one pupil's handwriting (reduced one-half) before and after diagnostic teaching.

ormations are the rule, not the startling exception. The samples in Figure 4 show such a reformation. In every school where my exercises have been used, there have been dozens of other equally outstanding cases. The evidence all shows that diagnosis is just as important in handwriting as in any other subject, and just as productive of progress.

[1] In addition to these six points, there are special arrangements for left-handed pupils, who use differently written exercises as models. There is not space here to discuss these arrangements in detail, but it may be said that these diagnostic materials are so planned as to prevent the forcing of left-handed children into a motion appropriate only for right-handed persons.

SELECTED REFERENCES ON KINDERGARTEN-PRIMARY EDUCATION

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The references for the sixth annual list in kindergarten-primary education were selected from publications issued between January, 1937, and January, 1938. Apparent trends in the literature of the past year seem to emphasize (1) studies in child adjustment, (2) materials for enrichment of curriculum, and (3) continued analysis of "readiness" factors basic to systematic instruction in the three R's. Titles are grouped as in previous lists under three headings: (1) general educational aspects; (2) organization, techniques, and curriculum; (3) investigations and experimental studies.

General Educational Aspects[1]

149. Cowell, Charles C. "Play Behavior and Personality Analysis," *Educational Research Bulletin*, XVI (October 20, 1937), 182–86.

Points out that overt behavior gives reliable clues to the inner workings of a child's mind and that the playground affords the best performance test of child behavior.

150. Flannery, Regina. "Child Behavior from the Standpoint of the Cultural Anthropologist," *Journal of Educational Sociology*, X (April, 1937), 470–78.

The author studied children of Cree Indians of northern Canada. Reports that the child at an early age is responsible, self-reliant, nonaggressive, and generous in sharing with others. Adults seldom give physical correction or threaten a child into conformity.

151. Holmes, Margaret Cook. "The Kindergarten in America—Pioneer Period," *Childhood Education*, XIII (February, 1937), 269–73.

Traces historical development from establishment of first kindergarten by Mrs. Carl Schurz in 1855 to its recognition in public schools of St. Louis in 1873.

[1] See also Item 650 (Minor) in the list of selected references appearing in the November, 1937, number of the *Elementary School Journal* and Item 148 (Wexberg and Fritsch) in the March, 1938, number.

152. LODGE, RUPERT C. *Philosophy of Education.* New York: Harper & Bros., 1937. Pp. x+328.

Relates controversial issues in modern educational theory and practice to the basic philosophies of life—realism, idealism, and pragmatism.

153. MCCALL, WILLIAM A., and LOFTUS, JOHN J. "America's Largest City Experiments with a Crucial Educational Problem," *Teachers College Record*, XXXVIII (April, 1937), 602–6.

The long-term experiment now under way in New York City public schools is to be used to work out measures for determining educational values inherent in activity methods.

154. MINK, GRACE W. "An All Day Kindergarten in a Rural Consolidated School," *Childhood Education*, XIII (February, 1937), 262–65.

Describes a model kindergarten connected with a consolidated rural training school. Outlines varied programs for all-day sessions, as children remain until busses take them home at 3:15.

155. RAYMONT, THOMAS. *History of the Education of Young Children.* New York: Longmans, Green & Co., 1937. Pp. xii+352.

Traces history from post-Renaissance to present time. Major emphasis is given to developments in Great Britain.

156. SCHMIDTMAN, MARGUERITE L. "The Kindergarten in the Baltimore Public Schools," *Baltimore Bulletin of Education*, XV (November–December, 1937), 78–83.

Sets forth the present aims and the historical development of the kindergarten in Baltimore.

157. TEMPLE, ALICE. "The Kindergarten in America—Modern Period," *Childhood Education*, XIII (April, 1937), 358–63, 387.

Pays tribute to leaders in the modern movement and recounts progress made toward closer relations with elementary education.

158. THOM, D. A. *Child Management.* United States Children's Bureau Publication No. 143, 1937 (revised). Pp. 108.

Adds three new sections on the role of intelligence, care of the child during sickness and convalescence, and the mentally defective child. Includes discussion of psychological background of training and of guidance and material on special problems.

159. TIPPETT, JAMES S. "Toward a More Democratic Citizenship," *Childhood Education*, XIV (October, 1937), 58–61.

Analyzes forces shaping the curriculum; emphasizes democratic philosophy; and offers three guiding principles.

160. ZYVE, CLAIRE T. "A Suggestion for Evaluating School Activities," *Teachers College Record*, XXXVIII (May, 1937), 648–59.

Suggests that school activities of individuals, groups, schools, and school systems be classified as an aid in indicating areas of experience covered.

ORGANIZATION, TECHNIQUES, AND CURRICULUM[1]

161. ADAMS, FAY. "Should Beginning Reading Instruction Be Postponed?" *California Journal of Elementary Education*, V (February, 1937), 158–62.

Discusses physical, mental, emotional, and experiential factors influencing reading readiness and suggests revision of the first-grade curriculum.

162. ADAMS, OLGA (Compiler). *The Modern Kindergarten.* Washington: Association for Childhood Education, 1937. Pp. 36.

A bulletin dealing with the educational implications of the materials, activities, and procedures of the present-day kindergarten.

163. BERRY, FRANCES M. (Compiler). *Equipment and Supplies.* Washington: Association for Childhood Education, 1937. Pp. 38.

Contains lists of suggested equipment and supplies for nursery school, kindergarten, and primary grades. The bulletin is an outgrowth of findings of a committee which established testing centers throughout the country where materials were tried out under classroom conditions.

164. CHAVE, ERNEST J. *Personality Development in Children.* Chicago: University of Chicago Press, 1937. Pp. xiv+354.

Discusses three main influences which are considered to shape the developing personality: heredity, environment, and "the growing self."

165. COLEMAN, SATIS N., and THORN, ALICE G. *Another Singing Time—Songs for Nursery and School.* New York: Reynal & Hitchcock, 1937. Pp. 48.

Follows the point of view established by the authors' two earlier publications.

166. DOLCH, E. W. "Side Lights on a Combined Word List," *Elementary English Review*, XIV (January, 1937), 22–24.

Charts the probable vocabulary development of the average child based on a summary of numerous studies and concludes that the first-grade entrant has a meaning vocabulary of approximately two thousand words, to which is added eight hundred words during each of the first two grades and nine hundred in third grade.

167. FITZGERALD, JAMES A. "Psychology in the Reading Clinic," *Elementary English Review*, XIV (April, 1937), 133–37, 152.

Cites studies showing that most first-grade failures result from reading disabilities and recommends that diagnosis of reading disabilities consider present

[1] See also Item 400 (Streitz) and Item 403 (Washburne and Morphett) in the list of selected references appearing in the September, 1937, number of the *Elementary School Journal;* Item 465, Item 483 (Greene), Item 492 (Storm), Item 505 (Horn), and Item 512 (Woody) in the October, 1937, number of the *Elementary School Journal;* Item 553 (Bond), Item 554 (Dean), Item 559 (Harap and Barrett), Item 574 (Spencer), and Item 612 (Painter) in the November, 1937, number of the *Elementary School Journal;* Item 5 (Caswell and Campbell) in the January, 1938, number of the *School Review;* and Item 144 (Fries) in the March, 1938, number of the *Elementary School Journal.*

and past environment, general health and physical condition, intellectual level, interests, aptitudes, attitudes, and emotional traits.

168. FREEMAN, FRANK N. "Curriculum Investigations: Handwriting," *Review of Educational Research*, VII (April, 1937), 138–39, 199.

Points out significant findings of ten studies published between April, 1934, and April, 1937.

169. GRAY, WILLIAM S., FREEMAN, FRANK N., and BROWNELL, WILLIAM A. "Trends in the Three R's," *Childhood Education*, XIII (May, 1937), 414–21.

Analyzes ten desirable trends in reading; traces the evolution of present practices in handwriting; and stresses the teaching of the meaning of number.

170. HANNA, PAUL R. "Social Education for Childhood," *Childhood Education*, XIV (October, 1937), 74–77.

Defines social education, states twofold objective, presents typical learning situations, and describes school and community as social laboratories for attaining basic goals.

171. HARAP, HENRY. "Trends in the Early Elementary Curriculum," *Childhood Education*, XIV (October, 1937), 53–57.

Distinguishes seven trends and points out that these are attempts to put into practice theories long since accepted.

172. HEINIG, CHRISTINE. "Housing and Its Place in a Program of Childhood Education," *Childhood Education*, XIII (January, 1937), 220–24.

Outlines housing as a community problem, including school buildings, homes, and other structures.

173. JACOBSEN, E. W. "Characteristics of Good Teaching," *California Journal of Elementary Education*, V (February, 1937), 131–33.

Presents conclusions of a two-year study by a committee of Oakland teachers, principals, and supervisors under ten criteria analyzed in terms descriptive of pupil-teacher activities.

174. LANE, ROBERT HILL. "Organizing the Primary School," *Childhood Education*, XIV (November, 1937), 110–13.

Describes an organization based on social maturity of pupils and explains elimination of "grade" classification.

175. MAY, MARK A. "What Is Character Education?" *Parents' Magazine*, XII (April, 1937), 21, 58, 60.

Discusses four basic elements functional in character-making: (1) knowledge of at least one honorable solution to every social problem situation; (2) a social attitude, or a desire to use the knowledge; (3) social skill, or ability to do right; (4) goals and ideals toward which to strive.

176. MILLER, WILLIAM A. "The Picture Crutch in Reading," *Elementary English Review*, XIV (November, 1937), 263–64, 274.

Questions the intrinsic value of many illustrations in primary readers. Since most beginning reading books have few concepts not familiar to the child, pictures are unnecessary and a distraction to the reading process.

177. MURRAY, GRETCHEN O.; GARRISON, CHARLOTTE GANO; THORN, ALICE G., and SHEEHY, EMMA D. "The Four and Five Year Kindergarten: The First Two Grades of Horace Mann School," *Teachers College Record*, XXXVIII (April, 1937), 556–64.

Summarizes the differences between, and typical units of experience in, kindergartens for children four and five years old. Stresses the need of differentiated courses of study for these ages.

178. POLKINGHORNE, ADA (Compiler). *Foundations in Arithmetic*. Washington: Association for Childhood Education, 1937. Pp. 32.

Includes series of discussions by various writers on topics pertinent to the learning and the teaching of number in the primary school.

179. PRATT, MARJORIE, and MEIGHEN, MARY. "What Beginning Readers Read," *Elementary English Review*, XIV (April, 1937), 125–28, 151.

The authors analyzed preprimers and first readers and found the following content: units of factual information and little imaginative material; activities involving people, trips, and community.

180. ROGERS, JAMES FREDERICK. *Safety and Health of the School Child: A Self-Survey of School Conditions and Activities*. United States Office of Education Pamphlet No. 75 (1937). Pp. 30.

Deals with questions to be answered by the teacher on: (1) physical conditions of the school plant, (2) mental conditions of the child influencing health, (3) bodily conditions of the child affecting life and health, and (4) staff personnel and health of the teacher.

181. SUELTZ, BEN A. "Arithmetic Readiness and Curriculum Construction," *Mathematics Teacher*, XXX (October, 1937), 290–92.

Analyzes readiness into ability to see relationships in experiences with space and quantity. Stresses the importance of maturity and experience.

182. SWAN, AUGUSTA M. "Toys of All Times," *Childhood Education*, XIV (December, 1937), 170–72.

Deals with toys as they reflect history, customs, and life-activities of older civilizations and indicates similar values in toys of today that embody essence of the modern science age.

183. TATE, HARRY L. "The Influence of Phonics on Silent Reading in Grade I," *Elementary School Journal*, XXXVII (June, 1937), 752–63.

The author studied the problem with two classes in high-first grade. In one, daily instruction was given in phonics; in the other, training in word and phrase recognition and interpretation of text.

184. VAUGHAN, FRANCES M. "Book Service for Kindergarten and Primary Grades," *American Library Association Bulletin*, XXXI (August, 1937), 443–48.

Describes activities and lists book titles used in developing reading readiness in a central primary reading room.

185. WITTY, PAUL, and KOPEL, DAVID. "The Place of Phonetics in a Reading Program," *Educational Administration and Supervision*, XXIII (May, 1937), 321–34.

Finds a lack of agreement in the literature on historical development, trends in instruction, effects of phonics, and phonics in remedial reading.

186. WOODY, CLIFFORD. "When Shall Systematic Instruction in Arithmetic Begin?" *Educational Method*, XVI (January, 1937), 165–66.

Recommends that systematic instruction in arithmetic be postponed until Grade III and that number-learning prior to this level be given in connection with needs of children.

INVESTIGATIONS AND EXPERIMENTAL STUDIES[1]

187. ARRINGTON, RUTH E. "The Impact of Environment on the Social and Cultural Development of the Preschool Child," *Journal of Educational Sociology*, X (April, 1937), 451–63.

Points out the need for additional studies dealing with observation and measurement of the relation of social and material culture to behavior at early childhood levels.

188. ARTHUR, GRACE. "The Predictive Value of the Kuhlmann-Binet Scale for a Partially Americanized School Population," *Journal of Applied Psychology*, XXI (August, 1937), 359–64.

Reports a high degree of reliability for results of the Kuhlmann-Binet test administered to kindergarten-primary children from non-English-speaking homes, as shown by a retest seven years later by Kuhlmann-Anderson scale

189. BRADSHAW, RUTH E. "Children's Choices in Poetry in the First Grade," *Elementary English Review*, XIV (May, 1937), 168–76, 188.

A study of the reactions of primary-grade children to sixty poems selected for quality, rhythm, nature of theme, and appeal to child interests.

190. DAVIS EDITH A. "Mean Sentence Length Compared with Long and Short Sentences as a Reliable Measure of Language Development," *Child Development*, VIII (March, 1937), 69–79.

[1] See also Item 389 (Dawson), Item 410 (Gates), and Item 419 (Kyte) in the list of selected references appearing in the September, 1937, number of the *Elementary School Journal;* Item 451 (Gray) and Item 452 (Gray) in the October, 1937, number; Item 563 (Knight) and Item 564 (MacLatchy) in the November, 1937, number; and Item 123 (Keister and Updegraff) in the March, 1938, number.

The author studied 436 children, five and a half to nine and a half years of age. Found that one-word remarks decreased and long sentences increased with age. Reports a significant correlation between development of long sentences and socio-economic status.

191. DOLCH, E. W., and BLOOMSTER, MAURINE. "Phonic Readiness," *Elementary School Journal*, XXXVIII (November, 1937), 201–5.

Analyzes the relation between the use of phonics and the general maturity of first- and second-grade pupils as determined by intelligence tests.

192. GOODYKOONTZ, BESS. "A Bibliography of Unpublished Studies in Elementary English, 1934–1936," *Elementary English Review*, XIV (November and December, 1937), 250–56, 266; 293–300.

Reviews the contributions of eighty-three studies, more than twenty of which have significance for kindergarten-primary grades. Suggests questions for further research.

193. GRANT, ALBERT. "A Comparison of the Metropolitan Readiness Tests and the Pintner-Cunningham Primary Mental Test," *Elementary School Journal*, XXXVIII (October, 1937), 118–26.

Concludes from data secured for 3,561 first-grade pupils that Metropolitan Readiness Tests yield high correlations with ratings for the same pupils given by the Pintner-Cunningham test.

194. LERNER, EUGENE. "The Problem of Perspective in Moral Reasoning," *American Journal of Sociology*, XLIII (September, 1937), 249–69.

Responses of 112 boys at varying age levels were studied to determine factors delimiting judgment of right and wrong. To a child under eight or nine years a social situation is either "all black" or "all white," but, as he becomes more socialized, he learns to regard opinions and interests of others.

195. MACFARLANE, J. W., HONZIK, M. P., and DAVIS, M. H. "Reputation Differences among Young School Children," *Journal of Educational Psychology*, XXVIII (March, 1937), 161–75.

The authors presented brief descriptions to primary-school pupils and asked them to "guess" which classmate best fitted each description. Found close agreement in the pupils' ratings and high correlation with teachers' judgments.

196. PISTOR, FREDERICK. "Evaluating Newer School Practices by the Observational Method," *Appraising the Elementary-School Program*, pp. 377–89. Sixteenth Yearbook of the Department of Elementary School Principals. Bulletin of the Department of Elementary School Principals, Vol. XVI, No. 6. Washington: Department of Elementary School Principals of the National Education Association, 1937.

The author secured a list of trait actions from the judgments of expert observers, formulated descriptive definitions of traits, and used the definitions in appraising third- and fourth-grade pupils in progressive and traditional schools.

197. RAZRAN, G. H. S. "Conditioned Responses: A Classified Bibliography," *Psychological Bulletin*, XXXIV (April, 1937), 191–256.

Lists major studies, many of which are pertinent to teaching procedures with young children.

198. SPOERL, DOROTHY TILDEN. "Effect of Pictures on Recall of Stories Told Orally," *Child Development*, VIII (December, 1937), 295–98.

A study of effect of pictures on immediate and delayed recall of a group with average mental age slightly below normal.

199. WOODS, ELIZABETH and STAFF. "A Study of the Entering B1 Children in the Los Angeles City Schools," *Journal of Educational Research*, XXXI (September, 1937), 9–19.

Studied criteria for placement of pupils entering school and the extent to which educational philosophy regarding reading readiness functions in Los Angeles schools.

Educational Writings

REVIEWS AND BOOK NOTES

The school and the public.—Thousands of pages of educational literature have been devoted in recent years to arguments for bringing the educator and the layman closer together in understanding and appreciation of school needs, aims, and results. Many of the articles on this subject could be summarized in the sentence, "Educational interpretation is a good thing, and we ought to have more of it."

Although recent literature tends to assume that this service is an accepted school function, one of the latest publications[1] finds it necessary to devote the first chapter of what constitutes an excellent manual in this field, to judge-advocacy. The natural interest of parents in the welfare of their children is offered as a bait, and the dire catastrophe of depression curtailments is offered as a compelling motive for well-planned and sensibly executed programs of public relations for schools. The arguments advanced for interpretation constitute a veritable catalogue of misconceptions of education which can be righted, and of antagonisms which can be removed, through an effective program. If the discerning parent is puzzled because the modern school tries to operate on a "larnin'" yet "no lickin'" basis, if he is concerned because memorization plays so small a part in teaching methods today, if he fears that there is too little emphasis on the three R's because of the multitude of new subjects which have been introduced into the curriculum, if he feels that "the kids are allowed to run the schools nowadays," frequent contacts with the institution as it really is will disillusion him.

For the neglect of interpretation both teachers and administrators are to blame. Teachers and administrators and pupils pay the price of this neglect, a price well exemplified during the recent crash of American business when, "school-building construction was largely suspended, resulting in the attendance of 250,000 children on a part-time basis. Scores of thousands of others were crowded into temporary shacks. Approximately 4,000 badly needed rural school buildings were not constructed. Essential repairs to buildings were neglected. Leaking roofs, cracked plaster, broken stairs, worn-out boilers, and

[1] J. Erle Grinnell, *Interpreting the Public Schools.* A Manual of Principles and Practices of Public School Interpretation with Special Emphasis on Published Materials. New York: McGraw-Hill Book Co., Inc., 1937. Pp. xii+360. $2.75.

faulty ventilation systems were allowed to jeopardize the health of the children and to quadruple eventual repair and replacement cost," (p. 18). The depression measured the faith of the American people in education, and this faith in turn measures the extent to which the educator has kept before the American people the significance of free schooling in the building of a democratic nation.

The principles of interpretation are reduced to seven: (1) It should be continuous, even though the necessity for intensified efforts arises periodically throughout the school year. (2) It should be honest, to the point of exposing school weakness as well as strength. (3) It should be inclusive enough to interpret the socialized recitation as well as to give publicity to the football game. (4) It should be made understandable through good writing, effective speaking, and attractive illustration. (5) It should be dignified but aggressive, with the knowledge that the public prefers to be convinced rather than entreated. (6) It should reach everyone in the community: parents, who represent about half the taxpayers; businessmen, whose favorable attitudes are too frequently wooed to the neglect of others; and citizens who have no children in school nor any other personal reason focusing their attention on educational problems. (7) It should use every facility at hand, including commercial newspapers and school publications, parent-teacher and other civic organizations, school activities, and special home and school contacts.

The reader is warned that interpretation should not be an additional chore imposed upon workers in key positions who are already overburdened but that the principal responsibility should rest with a specially trained director of interpretation. While the qualifications of the interpreter are, perhaps, not detailed as fully as they should be, the book itself will go far toward improving the qualifications of educators who are willing to give it study and follow its suggestions with experiment. The book calls attention to the usual interpretive agencies existing in the average community and contributes more than usual emphasis on planning and appraising the use of these agencies. Forms and records are suggested for more effective functioning of the school machinery of interpretation.

A chapter devoted to the newspaper as an agency is replete with suggestions for topics of news stories and calendars for providing systematic and continuous news coverage of the schools throughout the year. A valuable chapter of the book is devoted to the part played in interpretation by the teacher, to whom great responsibility is assigned but to whom few suggestions are offered by most writers of school publicity.

The improvement of educational interpretation waits on better training of those who work in this field. The book is an important contribution to the development in teacher-training institutions of long-needed courses in educational interpretation.

BELMONT FARLEY

NATIONAL EDUCATION ASSOCIATION
WASHINGTON, D.C.

An improved measure of local ability to support schools.—Cornell's study[1] seeks a solution to difficulties encountered by state and local school districts when they assume joint responsibility for financing schools. Such equalization plans assume that local school districts should contribute to the support of their schools according to their ability to raise tax revenue for school purposes. The state then contributes the remaining amount required to support an accepted minimum program. Local school districts almost universally rely on the property tax because local taxing units are unable to administer efficiently such taxes as those on personal income or business. The use of assessed value of property, however, as a measure of local taxpaying ability is unsatisfactory. Assessed valuation in several states is determined locally by politically appointed assessors, who do not possess the ability to do the work adequately. Wide variations in the rate of assessment are known to exist frequently among local taxing units. Consequently some districts receive a larger, and some a smaller, amount of state aid than they deserve under an equalization program which employs assessed value of property as a basis for measuring taxpaying ability.

Cornell's study represents an attempt to avoid deficiencies in the machinery for assessing real property by substituting for assessed valuation an index of local taxpaying ability. Using as the criterion full value of real property as determined by the state tax board, Cornell has developed an ability index based on weightings assigned to six types of data: total population; retail sales; motor-vehicle registrations; value of farming, mining, and manufacturing production; number of individual income-tax returns filed with the federal government; and postal receipts. The superiority of his ability index over assessed valuation was demonstrated by applying both measures to conditions prevailing in the counties of the state of New York. It was found that, while the use of assessed valuation permitted, on the average, for the counties of that state an error of 16.1 per cent, the ability index permitted a corresponding error of 12.2 per cent.

Cornell has made an interesting approach to the solution of a baffling problem in state equalization programs. The immediate practical use of his findings, however, is limited to those states in which the county is the unit of local district organization (since the required data are not ordinarily available for smaller geographic areas) and in which reliable data as to full valuation of real property are not too infrequently obtainable.

Some may disagree with Cornell's basic assumption and propose that no temporary substitute for equitable assessment of real property should be suggested. These individuals may insist that, if full value of real property be the best index of local taxpaying ability (if it be the criterion), then attention should be focused on improving the machinery for assessing such property. Others

[1] Francis G. Cornell, *A Measure of Taxpaying Ability of Local School Administrative Units*. Teachers College Contributions to Education, No. 698. New York: Teachers College, Columbia University, 1936. Pp. viii+114. $1.60.

may agree with Cornell that, until assessment of real property can be made adequately certain, local school districts will experience injustice unless some workable substitute for full valuation can be found.

Regardless of the position taken on this point, it should be said that Cornell seems entirely fair in pointing out the limitations of his findings and the cautions that should be observed in the application of his index in state equalization programs.

LESLIE L. CHISHOLM

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A comprehensive treatment of the social sciences for teachers and supervisors.—For a number of years there has been a grave need for a comprehensive treatment of the curricular, the teaching, and the supervisory aspects of the social sciences in elementary and secondary schools. Fortunately for persons interested in these aspects of the social sciences, this need no longer exists; it was met during 1937 by the appearance of a well-balanced volume[1] written by a well-known author—a volume that will do much to restore sanity in a field heavily encumbered with pet notions and unbalanced schemes.

In making his synthesis of the present knowledge concerning the teaching of the social sciences, the author defines and differentiates the social sciences, stressing the obligation of the teacher to scholarship; traces the growth of the social-science curriculum; lays special emphasis on objectives and on the selection and the preparation of curriculum materials; describes the various types of equipment, materials, and supplies requisite to good teaching of the social sciences; analyzes the problems of teaching and learning especially pertinent to the teacher of the social sciences; explains the methods of special value to the teacher, emphasizing practical procedures and devices; and discusses certain aspects of evaluation and measurement in the field. The treatment of all these phases of the subject is thoroughly objective. The author has no pet theories to defend nor cocksure remedies to apply.

The treatment as a whole is organized into seven large aspects called "parts." In Part I, "The Foundation of the Social Studies," are three chapters devoted to the social studies, the social sciences, and methods in the social sciences. Such aspects of the subject as the development of the social sciences, national committee reports and the social-science curriculum, the report of the Commission on the Social Studies, and the present status of the social sciences are treated in Part II, entitled "The History and Status of the Social Studies." Parts III and IV are devoted to the making of the curriculum in the social sciences and to equipment. Objectives of the social sciences; selection, organization, and grading of curricular materials; and the textbook, workbooks, pictures,

[1] Edgar Bruce Wesley, *Teaching the Social Studies: Theory and Practice.* Boston: D. C. Heath & Co., 1937. Pp. xviii+636.

maps, and graphs are objectively treated in these two parts. Parts V and VI are devoted to "Teaching and Learning" and "Some Recognized Methods," including question and answer, informal lecture, unit procedure, problem, and project. The lone chapter in Part VII is entitled "Tests in the Social Studies." While few citations to the existing literature appear in the footnotes, it is evident to one familiar with this literature that the author made extensive use of it.

Inasmuch as the volume is intended as a textbook for classes in the teaching of the social sciences, the bibliographies at the ends of the chapters will be much appreciated by those who so use it. On the whole, the items in these bibliographies are pertinent and useful, although some readers may feel that too many of the references belong in the field of general education more than in the special field of the social sciences.

R. M. TRYON

Remedial work in reading.—All persons interested in helping children in the public schools who are poor readers will welcome an excellent description[1] of remedial work carried out in Washington, D.C. A grant of funds permitted the employment of a specialist, Marion Monroe, who planned the program and helped train the teachers and the counselors doing the work. The eight schools reported on include two elementary schools, two junior high schools, two senior high schools, and two vocational schools. Rather complete figures are given on 641 pupils. The work in each school is described in detail. The whole furnishes the clearest picture now available of a remedial-reading program on a large scale.

Almost all the work was done by the small-group method. It is too bad that the book does not give definite information about what was done in these groups. Various silent-reading devices are mentioned, and there was some oral reading by one child while the others listened. Most of the remedial techniques discussed, however, are things to be done by an individual. In groups including from eight to twelve pupils, such as were common in this project, how did all these children get to do these individual things? What were the others doing while one was performing his part? This uncertainty about how to adapt individual remedial techniques is what is bothering teachers who have remedial groups assigned to them. It is to be regretted that the report does not give more details at this point, since obviously many group methods must have been developed in this large project.

Two chapters present thorough methods of diagnosis of reading disabilities and a full set of principles and methods for remedial work. The methods are those already made familiar in Monroe's *Children Who Cannot Read* (Chicago:

[1] Marion Monroe, Bertie Backus, and Principals, Counselors, and Teachers of the Washington, D.C., Public Schools, *Remedial Reading: A Monograph in Character Education.* Boston: Houghton Mifflin Co., 1937. Pp. xii+172. $1.40.

University of Chicago Press, 1932), but they are here presented in compact and very definite form. They follow the hypothesis that "reading errors" can be divided into ten types and that each type is to be corrected by sets of exercises. This classification of errors, which corresponds closely with the classification on the Gray Standardized Oral Reading Check Tests, will not satisfy all teachers of reading. Most teachers are accustomed to thinking in broader and simpler terms. They would be likely to say that poor readers need more sight vocabulary, more meaning vocabulary, and a practical knowledge of phonics. They would have difficulty in thinking of some children as having "consonant errors," "omission-of-word errors," and the like. The Monroe classification, on which her methods are built, has seemed, to many, to emphasize what the child does rather than why he does it. Inattention is the cause of many kinds of errors, and those errors are best attacked by securing greater attention. Then there are many workers in this field who are positive that the chief remedial method for all except nonreaders is to give the child plenty of fascinating reading matter at about his reading level. Then, unless there is some abnormal obstacle in the way, he will actively attack the reading process and work himself up to a higher level. While there are many persons who do not believe in the "remedial-exercise" method developed by Monroe, even these will find in the present report helpful ideas and many practical suggestions. The authors obviously had children in mind while they wrote the book.

It is fitting to emphasize a point merely mentioned in the report: that the benefits to the school system far exceed the improvement in reading reported for the 641 children. These same children benefited and will continue to benefit in many other directions. The many teachers involved are more enlightened and sympathetic in their work, and all the other teachers have been stimulated to some degree. In consequence all the children in the whole school system will be receiving a better education in many ways as a result of this project in remedial reading.

E. W. Dolch

University of Illinois

An activity program in elementary-school science.—Elementary-school science, under its righful name, is beginning to come into its own, and the book by Croxton[1] is a welcome contribution for teachers in this field.

In Part I the author sketches the history of the development of science in the elementary school and explains clearly the relations that it bears to the nature-study movement. He discusses, in addition, the place of science-teaching in the curriculum as a whole and outlines a functional philosophy of education which constitutes his "frame of reference" for the book. Among other topics treated are the following: "Education as Development through Interaction," "Aims in Science Teaching," "The Importance of Method,"

[1] W. C. Croxton, *Science in the Elementary School: Including an Activity Program.* New York: McGraw-Hill Book Co., Inc., 1937. Pp. xii+454. $3.00.

ıe Results of Our Efforts," and "Research Contributions and s in the Field of Elementary Science Education." The treat-h a nature that the book is not only valuable for teachers in ful as a textbook or reference book for classes in the teaching of ool science.

ın "analysis of activities . . . . intended as source material for ɜr" (p. 125). These activities are grouped under autumn, winter, ivities, thirty-four under each classification. Samples of these ın—"Making Friends with the Birds," "Finding How We Get Cooking a Meal Out of Doors," and "Starting a School Mu-ıter—"Keeping a Winter Nature Calendar," "Learning To Tell)iscovering How Our Electric Devices Work," and "Holding a Show"; for spring—"Discovering Signs of Spring," "Making "Planting a Tree," "Tracing the Story of a Stream Valley," ı Science Exhibit."

102 "activities" suggested is accompanied by a set of "aims" or activity and its subsidiary activities are designed to accom-oncrete "suggestions" to direct the children in the accomplish-urposes in mind; a discussion of the "contributing learnings" ıot be overlooked; and an excellent list of supplementary refer-o2 "activities" parallel, in some respects, what might be called ıe teachers or "projects" by others. The author, however, does f these terms except in the Index, where all activities are included "Projects 128–446."

ɜr is favorably impressed by the book. The theoretical discus-ritten, scholarly, and in keeping with modern concepts in educa-c viewpoint is consistently maintained throughout. The activities easonable, sensible, and enjoyable. The book is attractive and d as a distinct and needed contribution in the field.

A. W. HURD

NIVERSITY
INNESOTA

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h troublesome behavior.—While numerous books and magazine ; with clinical diagnosis and treatment of behavior problems ren have been published in recent years, few have emphasized f such problems in the existing conditions of the average or a ɔlic-school situation. A recent study[1] concerns itself exclusively ery and the treatment of troublesomeness in a public elementary-ı.

ıses studied were exclusively negro and were from a fairly homo-

ry Tucker, *A Study of Problem Pupils*. Teachers College Contributions No. 720. New York: Teachers College, Columbia University, 1937. 1.85.

geneous community background of low socio-economic status, it does not follow that the findings are not applicable generally.

The study reports a detailed analysis by principal teachers of the behavior of one hundred "troublemakers" in Public School 90, Manhattan, New York City. Comparisons were made with a control group of one hundred non-troublemakers in the same school. More detailed comparisons were made with a smaller number of selected equated pairs.

A composite of teacher judgments was used to check the reliability of the nomination of troublemakers by individual teachers. Instruments used for the collection of data include: the Haggerty Intelligence Examination, the Turner Trait-rating Scale, the Pintner General Opinion Test, the Barr Occupational Scale, and a "standard diet table." Other data were secured through home visitation, physical measurement, and teacher observation.

The first two chapters, consisting of fourteen pages, serve to outline the problem and describe the methods and the subjects used. Chapters iii and iv (thirty-nine pages) present the statistical data of the study. Chapter v (twenty-four pages) is devoted to corrective techniques used in individual cases of troublesome behavior. Chapter vi (consisting of eighty-one pages) gives twenty-one detailed case studies of problem pupils included in the study. A concise summary chapter and a well-selected bibliography conclude the volume.

The findings are not new or startling. Low mentality, broken homes, poor health, a family history of nervousness, ignorant and antisocial parents, poverty, and irregular home life are still found to be associated with school behavior problems.

The description of means used to re-educate troublemakers is interesting and challenging because of the simplicity of the techniques used and the apparent success. If, however, the same objective methods had been used in checking the results of treatment as were used in the "before-taking" descriptions of cases, the conclusions with regard to case improvement would be more convincing. A sampling of case histories of non-troublemakers would also have been helpful in giving the reader a perspective for understanding the problem-case histories.

The reader of this study cannot help feeling that he has secured an increased insight into troublesome behavior in school pupils. While opinions will differ with regard to the place of the study in the archives of pure research, there can be little doubt that it is a distinctly valuable contribution to those engaged in school administration who must "read as they run."

JAMES F. BURSCH

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Big-muscle activities in elementary schools.—At a time when the preparation of classroom teachers is considered quite inadequate if it is limited to traditional academic education dealing exclusively with training the mind, one welcomes

any serious attempt to inaugurate an education of the *whole* child in the elementary schools.

The teaching of physical education is required by law in many states and in countless communities this responsibility rests on the classroom teacher. Lack of preparation and supervision and, therefore, the teacher's inadequate appreciation and understanding of the fundamental place of physical education in the education of the whole child are but a few of the reasons for the claim that the author of the volume under review[1] has made a significant contribution to professional education.

A discussion of the biological needs of children and of the possibilities for social adjustment is followed by a statement, in terms of child growth, of the objectives of physical education, with examples of specific objectives listed by grades. Class organization and management of equipment are founded on the premise that "democratic, pupil-controlled, teacher-guided organization" is preferable to an "autocratic, teacher-controlled, dictatorship organization" (p. 15). Detailed steps are given the teacher for the organization of squads and squad leaders and for care and control of equipment. The development of leadership and "followership" is not left to chance but is planned for the teacher in every detail.

Verbatim discussions of game and play situations show that this vital part of the learning process is as important in physical-education activities as in other learning situations.

The remainder of the book deals with invaluable teaching materials, analyses of game and dance activities, and the methods and techniques of teaching motor skills to elementary-school children.

Traditionally, the younger children have been handicapped because of the belief that motor skills should not be taught to them. The author is to be commended for her contention that this belief is erroneous and that it helps to explain why many children finish public schools so lacking in skills that little or no satisfaction results in performing them. The classroom teacher will find real help in overcoming this difficulty by following the brief and simple analyses of fundamental skills, amply illustrated by numerous pictures. Games, sports, self-testing activities, rhythms, and dances suited to the lower grade levels are presented. This material is supplemented by a selected list of references to rich and varied subject matter which every classroom teacher should read.

Another commendable feature designed to aid the overworked classroom teacher is the presentation of teaching materials linking objectives and subject matter together in outline form for each grade. A few sample lesson plans are also helpful.

This book fills one of the greatest needs in education and should prove a boon to the already overworked classroom teacher who would break down the prejudice against motor education and introduce an education of the whole child.

[1] Dorothy La Salle, *Physical Education for the Classroom Teacher*. New York: A. S. Barnes & Co., Inc., 1937. Pp. xii+210. $2.00.

It is also highly recommended for physical-education teachers and supervisors, principals, and other workers who are interested in the complete education of children.

WILLIAM L. HUGHES

TEACHERS COLLEGE, COLUMBIA UNIVERSITY

A story of modern exploration.—In a recent publication[1] the narrative of the second Byrd Antarctic expedition has been ably told for children by the youngest member of that party, with the collaboration of his mother. The book, with its penguin-illustrated cover, its many excellent photographs and its easily read pages, will prove attractive to most children.

The story moves smoothly along from the preparation for leaving the United States until the return to Boston. A contributing factor to the forward-moving story is the singular freedom of the text from names of expedition members, Admiral Byrd being the chief exception. Thus the emphasis is placed on happenings and details of life rather than on individuals. The personnel and the occupations of the winter population of Little America are relegated to a list at the end of the book.

The authors have made a happy choice of incidents and details of everyday life that will be of interest to children. They have explained naturally and simply new terms and words as these are introduced. Not only does the book portray (occasionally with a whimsical touch) the adventure of modern exploration, but it also lays stress on the part played by careful preparation and by modern scientific tools, instruments, and methods, as well as on the necessity for co-operation in such a group.

In addition to the inclusion of much informational material throughout the narrative, a résumé chapter, "Some of the Things We Learned in the Antarctic," indicates the general type of valuable results of the expedition and describes such of these as will interest children.

The book is to be recommended for story and information value to children from eleven years up and even to adults seeking a condensed version of the second Antarctic expedition.

RUTH R. WATSON

Books for nature study.—Two lively nature readers[2] are organized quite as much for the purpose of stimulating teachers and pupils to take an active interest in nature about them as for the purpose of giving pupils practice in science-reading. The contents of each book are arranged to facilitate nature-

[1] Joe Hill, Jr., and Ola Davis Hill, *In Little America with Byrd: Based upon Experiences of the Fifty-six Men of the Second Antarctic Expedition.* Boston: Ginn & Co., 1937. Pp. viii+264. $1.00.

[2] The Nature Activity Readers: Book IV, *Earth and Sky* by Paul Grey Edwards and James Woodward Sherman, pp. xvi+278, $0.92; Book V, *Forest Families* by Verne O. Graham and James Woodward Sherman, pp. xvi+316, $0.96. Boston: Little Brown & Co., 1937.

teaching in autumn, winter, and spring. For example, the autumn division of Book IV contains seasonable materials on birds, insects, animals, plants, earth, and sky. Such an arrangement and the balance of well-selected stories, poems, illustrations, and suggested activities can do much to help arouse interest and action among pupils in elementary schools.

Another publication[1] deals with mammals of the zoo. What child does not take a keen interest in up-to-date information concerning the life-history, adaptations, and habitats of monkeys, whales, elephants, anteaters, porcupines, bats, kangaroos, and other mammals? To help satisfy a general interest in this field, certain New York writers, artists, and zoo curators have, through co-operative efforts, produced a highly attractive book on typical mammals of the zoo.

The contents of this book are arranged according to the seventeen important divisions of mammals, beginning with the great apes and ending with the duck-billed platypus. Each of the seventy-odd animals treated is allotted approximately one page of interesting text, headed by an artistic map and a few key facts, and one page of large-size illustrations reproduced from excellent photographs. Each illustration is accompanied by a full inscription that adds much to the text. This highly artistic, interesting, credible book on mammals will appeal to school children of all ages.

RUSSELL R. SPAFFORD

AUSTIN PEAY NORMAL SCHOOL
CLARKSVILLE, TENNESSEE

CURRENT PUBLICATIONS RECEIVED

GENERAL EDUCATIONAL METHOD, HISTORY, THEORY AND PRACTICE

The Community School. Edited by Samuel Everett. Society for Curriculum Study, Committee on the Community School. New York: D. Appleton–Century Co., Inc., 1938. Pp. xii+488. $2.25.

DAMBACH, JOHN. *Physical Education in Germany.* Teachers College Contributions to Education, No. 731. New York: Teachers College, Columbia University, 1937. Pp. 116. $1.60.

DEWEY, JOHN. *Experience and Education.* The Kappa Delta Pi Lecture Series. New York: Macmillan Co., 1938. Pp. xii+116. $1.25.

Educational Freedom and Democracy. Second Yearbook of the John Dewey Society. Edited by Harold B. Alberty and Boyd H. Bode. New York: D. Appleton–Century Co., Inc., 1938. Pp. viii+292. $2.25.

GESELL, ARNOLD, and THOMPSON, HELEN, assisted by CATHERINE STRUNK

[1] *Who's Who in the Zoo: Natural History of Mammals.* Prepared by Workers of the WPA Federal Writers' Project in the City of New York. Sponsored by the Guild's Committee for Federal Writers' Publications, Inc. New York: Halcyon House, 1937. Pp. xii+212.

AMATRUDA. *The Psychology of Early Growth: Including Norms of Infant Behavior and a Method of Genetic Analysis*. New York: Macmillan Co., 1938. Pp. x+290. $4.00.

GRAY, WILLIAM S., and HOLMES, ELEANOR. *The Development of Meaning Vocabularies in Reading: An Experimental Study*. Publications of the Laboratory Schools, No. 6. Chicago: Department of Education, University of Chicago, 1938. Pp. xii+140. $1.50.

HOCKETT, JOHN A., and JACOBSEN, E. W. *Modern Practices in the Elementary School*. Boston: Ginn & Co., 1938. Pp. vi+346. $2.60.

RACE, HENRIETTA V. *The Psychology of Learning through Experience*. Boston: Ginn & Co., 1938. Pp. viii+384. $2.00.

REED, HOMER B. *Psychology of Elementary School Subjects*. Boston: Ginn & Co., 1938 (revised). Pp. xii+582. $2.40.

Selected References in Education, 1937. Reprinted from the *School Review* and the *Elementary School Journal* for January to December, 1937. Supplementary Educational Monographs, No. 46. Chicago: Department of Education, University of Chicago, 1938. Pp. x+224. $0.90.

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THE ELEMENTARY SCHOOL JOURNAL

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Educational News and Editorial Comment

TENDENCIES IN THE REORGANIZATION OF STATE GOVERNMENTS

The American people are facing today important problems of institutional reorganization. The impact of invention and technological change has left few, if any, social and political institutions unchanged. In the whole area of human relationships, whether of government, economy, or ethics, we are faced with the necessity of adjustment and adaptation. The task of institutional reconstruction which lies ahead will require leadership of the highest order and a wide diffusion of intelligence among the people. Teachers everywhere and at all educational levels should cultivate an understanding of the forces that are making for institutional change and should be prepared to give intelligent direction to the change. It is for this reason that the *Elementary School Journal* has adopted the policy of introducing into this section items and comment relating to significant aspects of social change and adjustment.

It is reasonably certain that the future will see both the functions and the structure of government in this country cast into new molds. The line which has separated economics from government has, in a

measure, already been effaced; new functions are thrust on government, now in this area of life and now in that. Townships, counties, school districts, and other units of local administration have been rendered obsolete; power flows from one unit of government to another, from county and school district to the state, from the state to the city, and from the state to the federal government; a new distribution of functions between the legislative and the executive branches of government occurs; and new agencies of administrative control develop.

In a recent number of *State Government*, Paul T. Stafford, assistant professor of politics at Princeton University, comments as follows on the reconstruction of state governments that is now taking place:

> American state government has today entered an era of sweeping reorganization. Slowly but surely its traditional pattern is being revised and reconstructed along lines that are entirely new. Already there can be seen the emerging outlines of a new governmental framework within which the modern functions of state government may be more expeditiously and effectively discharged.
>
> To be properly understood, the modern movement for reconstruction of state government must be visualized against a background of current major trends in government. The outstanding political phenomenon of the twentieth century in this country is the enormous expansion of governmental responsibility and action. Once confined largely to the role of policing the community, to the task of protecting one's rights from infringement by others, governments are now directing their principal energies to the active betterment of the individual's circumstance.
>
> In this general enlargement of public authority the states have been major participants. It is only necessary to point out that in recent decisions, such as those upholding state minimum wage and unemployment compensation legislation, final judicial approval has been granted to a great expansion of state activity in the general field of social welfare, that increasingly the states are extending their control over and participating in the affairs of their local governments, and that under the elaborate system of federal grants-in-aid now being developed the states are administering a wide variety of public services on a scale heretofore unknown.
>
> Government at all levels is confronted with the fact that the existing machinery and methods of operation are highly inadequate to the proper discharge of its new obligations. The reconstruction movement in state government may thus be seen as a product of modern economic and social change. The need for revision of the governing process is perhaps more urgent in state government than in either of the other two great levels of government. The traditional pattern of state government often fails to achieve anything like an equitable

representation of important group interests in the legislative process, frequently obstructs honest efforts at the efficient operation of public enterprises, and generally thwarts the effective and speedy administration of justice.

The lines along which the reform of state government is currently proceeding are many and varied. In the field of policy-determination there is widespread effort to modernize the structure and operation of the legislative process. One state has already swept into discard its bicameral legislature and substituted therefor a unicameral system capable of performing more efficiently the duties of modern lawmaking. Other states will probably in the not too distant future see fit likewise to remodel their representative systems.

Less drastic but equally important are the numerous proposals that are designed to improve the quality of legislation. These include the establishment of competently manned legislative reference bureaus, research units, and bill-drafting agencies, the extension of the initiative and referendum, and various provisions which would reduce the volume of petty, needless legislation and thereby conserve the time of legislators for consideration of important questions of public policy.

There are also many proposals looking toward the improvement of legislative procedure and committee organization, and measures which aim at the improvement in quality of legislative membership by reducing the size of the legislature and lengthening the terms of legislators.

Finally, there is the proposal for a legislative council which it is hoped will provide a continuous leadership in legislation and at the same time strengthen the co-operative action of the legislature and the chief executive.

Reform in the executive branch of state government is widely urged, and because of its greater popular support has progressed much farther. The chief purpose here is to centralize responsibility for administration in the hands of the governor. The necessity for reform has likewise been recognized in the field of adjudication. Progress is being made in the much-needed revision of archaic procedural rules and in the strengthening of state judicial machinery. . . . .

The modern need for reform may be seen, furthermore, as the motivating influence in the rise of the state planning movement. Modern state planning has the characteristic feature of comprehensiveness that distinguishes it from older forms of governmental planning. A master state plan envisages all the resources, economic and social, within a state and endeavors to point the way to their most effective utilization or preservation. Planning in this sense is new. What it may accomplish, no one can foretell. Conducted in accordance with democratic traditions and guided by a spirit of tolerance, it may well serve to guide states safely through the perilous work of reconstruction. . . . .

With the general reconstruction of state government, legislatures will be better equipped to perform the tasks of modern legislation. The development of nonpartisan fact-finding agencies will provide legislators with a more adequate factual knowledge on which to base their determinations. The establish-

ment of legislative councils or agencies of a similar character will, moreover, provide a channel through which a vigorous legislative leadership may be asserted.

Viewed at large, the ultimate goal of the reform movement among the states is to establish the foundation for a scientific approach to problems of government. The essential elements of scientific methodology—effective organization, trained personnel, and factual knowledge—are the common aims of the changes now advocated. Modern reform recognizes that the states' policies can be properly determined and effectively executed only with a complete knowledge of the pertinent facts and only through a well-organized, competently manned governmental machinery. It foresees that uninformed action and inefficient administration under modern conditions lead to highly destructive consequences, and are therefore too dangerous to be tolerated. . . . .

The rise of the scientific method may be expected to increase rather than diminish the importance of political judgment in the governing process. To control and lead the new and improved agencies of public power which the states are now creating is the real challenge to the future. Here will be required the capacity to make farsighted judgments in the light of the great mass of social data that will be made available, and the ability to direct wisely the greater resources and instruments of government in a well-balanced program of modernized public service.

Here and There among the Schools

A correction.—In the March issue of the *Elementary School Journal*, we commented on the teaching units for the social studies which have been developed in the schools of Manitowoc, Wisconsin. Through oversight on our part we failed to note that Miss Alice Brady, while supervisor of elementary schools, was largely responsible for the initiation and the development of the first two volumes in the series. She also spent time in developing plans for the third volume.

An integrated kindergarten–first-grade program.—One of the most devastating criticisms which has appropriately been directed against the American school system is the high percentage of failure in the first grade. The work of the schools has been so organized that many thousands of children each year have been confronted with inevitable failure at the threshold of their formal schooling: the first-grade pupils have been the shock troops of the educational system. Fortunately for children and for the national interest, there is a widespread effort to correct this situation. As an illustration mention may be made of the experiment which, under the leadership of

Forbes H. Norris, assistant superintendent of schools of Richmond, Virginia, is being carried forward in unifying the work of the kindergarten and the first grade, the purpose being to develop a program that will contribute to the better adjustment of the individual pupil. Pupils enter the junior-primary program at the age of five and a half and continue it until they are judged ready to undertake the work of the second grade. Before entering the second grade, the pupil must give evidence of having acquired certain definite habits and skills. He must be able, for example, to co-operate with a group; he must manifest some ability in initiating and planning activities; he must show willingness and ability to take part in group discussions; he must have the ability to read fluently from any preprimer and some easy primers; he must have some knowledge of number concepts; and he must exhibit mental and social maturity comparable to the group of which he is a member.

Developing mutual understanding and integration within a school system through interchange of teachers.—Superintendent B. L. Smith, of Greensboro, North Carolina, reports that the schools of that city have adopted the practice of exchanging teachers within the school system. Two dates are announced for the exchange. One-half of the teachers of a given school participate on the first day. An intervening day is allowed, and the other half of the teachers exchange on the second date. Teachers are paired so that only two persons are involved in an exchange. In advance of the date, they meet, impart information, and make all necessary arrangements. Assignments are so made as to cover all grades, all subjects, and all schools. One teacher from each school goes into every other school within the system. The grade level extends from the first through the eleventh. Subject assignments are, to a degree, disregarded.

Superintendent Smith reports that the purposes of the practice are (1) to enable teachers to keep out of a rut and to receive professional stimulation; (2) to develop an integration of the curriculum, both vertically and horizontally; and (3) to develop an improved understanding of the operation of the entire school system. The experiment has met with enthusiasm and approval, and it has been found beneficial in promoting worth-while attitudes and understandings.

Free dental service to needy pupils.—From Charles S. Turner, elementary supervisor of the schools of Columbia, Missouri, we have received the following statement describing the establishment of free dental service in the schools of that city.

Schools are coming more and more to the realization that they must look after the physical as well as the intellectual side of the lives of the children under their care. A forward step in this direction was taken by Superintendent W. E. Rosenstengel and the Board of Education of Columbia, Missouri, when they employed a local dentist to devote one-half his time to the children in the public schools. This step was prompted by the facts that 65 per cent of the pupils had defective teeth and that little was being done to improve the situation.

There are three major objectives to this program: (1) to educate the pupils and parents as to the necessity for sound teeth, (2) to point out the defects that are existent, and (3) to repair the defective teeth of children whose parents are unable to have the work done by a regular dentist.

During the first three weeks of his employment the dentist made talks to 44 classrooms and examined the teeth of 250 sixth-grade children. He then used three weeks in repairing the teeth of those who could not otherwise get the work done. He is now working with the children of the fifth grade and will proceed down through the grades until all have been examined.

The members of the dental profession of Columbia are wholeheartedly behind the program, since it points out to children and parents the needs for dental work. Only pupils whose parents cannot pay for treatment by a private dentist are given attention without charge.

A working plan for student government in the elementary school.—The Moreland Elementary School in Shaker Heights, Ohio, has in operation a plan of pupil self-government which has the following aims: (1) to give pupils practice in self-government, that they may learn to know and use wisely the democratic processes of government; (2) to build up a spirit of co-operation whereby each pupil within the group contributes toward the well-being of all; (3) to give training in parliamentary procedure; (4) to train for leadership by providing situations demanding it; (5) to provide for expression and independent thought and action on the part of the pupils insofar as it promotes the well-being of all; and (6) to establish in the pupils respect for laws which they make themselves and for the authority vested in their officers.

A detailed outline of the plan has been prepared in mimeographed form and should be of interest to principals and teachers elsewhere

who may be interested in initiating a similar type of pupil self-government. The report was sent to us by Arthur K. Loomis, superintendent of schools, Shaker Heights, Ohio.

A Guide to Safety Education

The evidence is conclusive that safety education in this country has been effective in reducing traffic accidents. From 1926 to 1935 child deaths in traffic decreased 18 per cent, while deaths of adults increased 91 per cent. The greatest gains have been made with elementary-school children, according to a study by the Bureau of Public Roads of the United States Department of Agriculture. Presumably, these are the children influenced most by the teaching of safety education in the schools. Safety education has been regarded as essentially an urban problem; until recently cities received the blame for an undue proportion of motor-vehicle accidents because the victims of accidents on the rural highways were brought to city hospitals and their deaths were recorded there. The Bureau of the Census corrected this error in 1934 and showed that two-thirds of the traffic fatalities occurred on rural highways.

Teachers and others who may be interested in promoting a program of safety education will find help in a pamphlet recently published by the United States Department of Agriculture. The pamphlet was prepared by the executive committee of the National Conference on Street and Highway Safety and is published under the title *Guides to Traffic Safety*. It outlines the best methods known today for securing traffic safety. The discussion is brief but comprehensive, and references are given to other published material on the subject. The report may be obtained for ten cents from the Government Printing Office, Washington, D.C.

Problems and Attitudes of American Youth

The American Youth Commission has recently completed an extensive survey of the youth of the state of Maryland. It is believed that the persons included in the survey are representative of the youth throughout the country. The report of the survey has not yet been published, but the commission has released a statement of some of the more important findings. The following paragraphs are quoted from the release.

America's younger generation, perplexed by the difficulties of making a living, finds economic security by long odds its most pressing problem. Convinced that the economic system no longer offers its old-time opportunities, it sees increased intervention in this area by the federal government as its best chance of happiness.

These conclusions, based on young people's own statements to interviewers, were presented to the American Youth Commission in a preliminary report on its recently completed survey of a scientifically selected "youth sample."

The sample comprised 13,528 youths between the ages of sixteen and twenty-four. The commission considers them representative of America's 20,000,000 persons in this age group, though all of them are residents of the state of Maryland.

Seventy-three per cent of the young people thought the federal government should do something about wages and hours, and an overwhelming majority believed Uncle Sam should provide them with jobs in times of unemployment. In any event, they considered that making a satisfactory living was their vital need, and that "somebody should do something about it."

Most of those with jobs were found to be dissatisfied with their wages or the kind of work they were doing, and unemployed youth were discouraged about their inability to get jobs. In fact, a large proportion of young people never have had full-time work, and many admitted that they had reached the point where they no longer were actively seeking employment.

Neither idle youths nor those with jobs were found by interviewers to be making satisfying or effective use of their leisure time.

Lack of education doomed a large proportion of boys and girls to low-pay occupations, the commission learned, and the report stated that youths themselves concluded that much of the education received is not adapted to their pressing needs. More than half of those who had not gone beyond the eighth grade said it was because of their economic difficulties.

Youth claimed, however, that the schools have often failed to give them a clear idea of the economic problems they would have to face and to guide them toward making a satisfactory vocational adjustment. Those who had received vocational guidance praised it highly, and, as would be expected, they deeply appreciated the cultural value of the school's program.

Home circumstances have handicapped a large proportion of young people, the commission was told, especially where there were many in the family. It was reported that a definite cycle of economic determinism was operating in certain occupational groups, where there was the combination of large families with low incomes. In such families, boys and girls leave school early to seek work, it was said, and in turn are caught for life in low-pay occupations. They tend to marry early and to rear large families, which repeat the hopeless cycle, the report stated.

Examining the role of the church in the life of youth, the commission learned

that it still exercised a strong hold, as most young people were affiliated with churches and attended with some degree of regularity.

Most of those interviewed were convinced that the church was primarily a place of worship and that it should be concerned with religious matters rather than with social and economic problems.

At the same time, it was found that young people consider youth's problem of behavior an important one. While 57 per cent thought youth's most pressing problem was one of dollars and cents, 11 per cent thought it one of conduct or morals.

Another 11 per cent voted for education as the most pressing concern, while 7 per cent thought the youth problem primarily concerned the home and 5 per cent believed the recreational problem the most important.

The restlessness of youth at work was reflected in a corresponding dissatisfaction with home surroundings. Most of those living in villages or small towns said they would prefer to live somewhere else, and 46 per cent of farm youth expressed a yearning to migrate.

City and suburban youth were comparatively well satisfied, and it was indicated that, if young people had their way, there would be increased urban migration at the expense of rural areas.

Young men and women living with their families expressed no great eagerness to depart from the parental domicile and collectively indicated that the holding power of the home is still great.

When asked how many children they would like under ideal circumstances, most young people expressed a desire for much smaller families than those of their parents. The average number of children desired was 2.7 per family.

The One-Teacher School in the American Educational System

In an article appearing in a recent number of *School Life*, Walter H. Gaumnitz, senior specialist in rural-education problems, United States Office of Education, discusses at some length the elimination of the one-teacher school during the past twenty years. It is apparent that this type of school is still an important educational institution in the United States and that any adequate program of education must give due weight to this fact. The following paragraphs are quoted from Mr. Gaumnitz' article.

Turning our attention to the statistics, it will be seen that in the 20 years from 1916 to 1936 the total number of one-teacher schools has been reduced from 200,094 to 132,831. This is a reduction of almost exactly one in three.

In 1916 the one-teacher schools constituted 71.1 per cent of all the schools in the United States; in 1936 they were only 56.7 per cent of the total. Considering the problem in terms of all of the teachers employed in the public

schools of the nation, the data show that 20 years ago nearly a third of them were in one-teacher schools; at present only about one in seven is employed in such schools. Appraising the place of these schools in the total educational picture on the basis of teachers, therefore, each of which may be thought of as representing a classroom, it is clear that the one-room school is at present less than half as important numerically as it was two decades ago. The growth in the size of the larger schools has increased the total teaching staff much faster than it has been reduced by the abandonment of these small schools. In addition to rural-school consolidation there has been operative in the movement toward larger schools such factors as the urban-ward migration and the increase in the educational life-span of the child. Until recently the latter has been especially rapid in the urban schools.

There can be no doubt that, in whatever way we may look at the matter, the one-teacher schools have during the past 20 years been passing out of the educational landscape very rapidly. However, there are still more than 130,000 of these schools in existence; they still constitute 56.7 per cent of the total number of schools of the nation, and 62.8 per cent of all of those located in the rural communities. They still enrol close to three million American boys and girls. It must, therefore, be said with emphasis that this school still forms a very important segment of our public-school system and that it should be treated as such. . . . .

Even the most superficial examination of American life today will show that most of the factors which made the one-teacher school so indispensable to our earlier history are still active in thousands of places. Many country roads are still poor, the climate is still severe, and the farms are still large and growing larger. The importance of the one-teacher school in the total picture may be on the wane but it still forms a significant part of our school system and it promises to continue to do so for generations to come. To regard this institution as a thing of the past no longer justifying the time and effort of school leaders to seek improvement would seem from the statistics and arguments available to be an erroneous point of view and a shortsighted policy.

Court Decisions Relating to Education during 1937

School administrators and teachers will be interested in the *Sixth Yearbook of School Law* recently published by the American Council on Education, 744 Jackson Place, Washington, D.C. It contains a narrative topical summary of decisions of the higher courts in all states of the United States in cases involving school law, as reported during 1937. A few selected chapter titles will serve to indicate the general scope and content of the volume: "The Rights of Pupils and Parents," "Teachers' Tenure," "The Management and Control of School Property," and "The Tort Liability of School Districts

onnel." The following discussion of teacher tenure nterest.

l of its school system through the enactment and repeal of atutes was touched upon by a decision of the United States nded down January 31, 1938. The Indiana courts had held ıct of 1933, repealing the act of 1927 in its application to 'stems, operated to destroy the tenure rights acquired by a in such a school system. This holding rested in part upon matters relating to state control of education no legislature ght of succeeding legislatures to institute changes of policy. 't of the United States declared: "If the people's representa- ıe public interest they may adopt a policy of contracting in usiness for a term longer than the life of the current legisla- at a teacher who had become a party to a contract for an fter serving five years in one school corporation under the not be deprived of her rights under it by the act of 1933, violate Article 1, Section 10 of the United States Constitu- es that no state shall pass any law impairing the obligation Justice Hugo Black dissented, epitomizing his views in his "In my opinion this reversal unconstitutionally limits the control Indiana's public-school system."

Summer Conference on Reading

on reading will be held in the Lounge of Judson versity of Chicago, on June 23, 24, and 25, 1938. me of the conference will be "The Improvement of nentary and Secondary Schools." The program has ıround a series of problems which are of vital interest school officers. Each of the problems will be intro- cussion before all members of the conference. Each will be followed by sectional meetings in which prob- interest to elementary-school, secondary-school, and eachers will be considered at length. Ample time is on the program for vigorous discussion from the floor.

Thursday Morning, June 23

: "The Nature and Extent of Reading Problems in American illiam S. Gray, Professor of Education, University of Chicago NGS: "The Development of Basic Reading Habits"
tary-School Level
sial Issues," Bernice Leary, Washington, D.C.

b) "Progressive Practice," Clara Belle Baker, Director, Children's School, National College of Education, Evanston, Illinois

2. At the Secondary-School Level
   a) "Significant Types of Training in Junior High Schools," Edith E. Shepherd, Teacher of English, University High School, University of Chicago
   b) "Current Programs of Training in Senior High Schools and Junior Colleges," Russell B. Thomas, Instructor in Humanities in the College, University of Chicago

Thursday Afternoon, June 23

GENERAL SESSION: "The Challenge of the Poor Reader," William S. Gray, Professor of Education, University of Chicago

SECTIONAL MEETINGS: "Group Diagnosis and Remedial Teaching"

1. At the Elementary-School Level
   a) "Causes of Retardation in Reading and Methods of Eliminating Them," Gertrude Whipple, Assistant Professor of Education, Wayne University, and Supervising Instructor of Reading, Detroit Public Schools
   b) "Adapting Instruction to the Needs of Poor Readers," Madeline Semmelmeyer, Principal, Frank W. Reilly School, Chicago, Illinois
2. At the Secondary-School Level
   a) "Types of Reading Deficiencies," James M. McCallister, Director of Personnel Service, Herzl City Junior College, Chicago, Illinois
   b) "Methods of Improving the Efficiency of Poor Readers," Maurine V. Rogers, Teacher of Remedial Reading, Laboratory Schools, University of Chicago
   c) "The Diagnostic and Remedial Program at Dartmouth College," Robert M. Bear, Assistant Professor of Psychology, Dartmouth College

Thursday Evening, June 23

"Evidence of Visual Deficiency among Poor Readers," Helen M. Robinson, Psychologist at the Orthogenic School, University of Chicago

"The Teaching of Reading to the Visually Inefficient Child," Louise Farwell Davis, Director of Research, National College of Education, Evanston, Illinois

Friday Morning, June 24

GENERAL SESSION: "The Expanded Role of Reading in the Various Curriculum Fields and Related Teaching Problems," William S. Gray, Professor of Education, University of Chicago

SECTIONAL MEETINGS: "Types of Guidance in Reading Provided in the Various Curriculum Fields"

1. At the Elementary-School Level
   a) "From the Supervisor's Viewpoint," Harry O. Gillet, Principal, University Elementary School, University of Chicago

b) "From the Teacher's Viewpoint," Ruth R. Watson, Teacher of History and Geography, University Elementary School, University of Chicago

2. At the Secondary-School Level
   a) Paul B. Jacobson, Principal, University High School, University of Chicago
   b) J. C. Stauffacher, Instructor in Psychology and Chairman of the Faculty Committee on Reading and Study Habits, Stephens College, Columbia, Missouri

Friday Afternoon, June 24

GENERAL SESSION: "The Unique Character of the Problem Presented by Severe Cases of Reading Disability," William S. Gray, Professor of Education, University of Chicago

"The Clinical Study and Treatment of Reading Disability"
   a) Grace E. Munson, Director of Child Study, Chicago Public Schools
   b) Augusta Jameson, Psychologist at the Institute for Juvenile Research, Chicago, Illinois
   c) Helen M. Robinson, Psychologist at the Orthogenic School, University of Chicago

Friday Evening, Dinner Meeting, June 24

Presentation and interpretation of data secured in clinical study of severe cases of reading disability at the University of Chicago. The following medical, sociological, and educational specialists will participate: Dr. Douglas N. Buchanan, Assistant Professor of Pediatrics; Dr. E. V. L. Brown, Professor of Ophthalmology; Dr. Arthur R. Turner, Assistant Professor of Pediatrics; Dr. Allan T. Kenyon, Assistant Professor of Medicine; Dr. Gordon H. Scott, Assistant Professor of Otolaryngology; Dr. Mandel Sherman, Associate Professor of Educational Psychology; Joseph Wepman, Speech Clinic of the Division of Otolaryngology; Gladys Hall, Field-Work Supervisor at the Orthogenic School; Charlotte Towle, Associate Professor of Psychiatric Social Work; Helen M. Robinson, Psychologist at the Orthogenic School; William S. Gray, Professor of Education.

Saturday Morning, June 25

GENERAL SESSION: "Current Issues Relating to Reading Interests and Tastes," William S. Gray, Professor of Education, University of Chicago

SECTIONAL MEETINGS: "The Stimulation of Reading Interests and Tastes"

1. At the Elementary-School Level
   a) "In the Classroom," Grace E. Storm, Assistant Professor of Kindergarten-Primary Education, University of Chicago
   b) "In the School and Public Library," Mildred L. Batchelder, Chief, School of Children's Library Division, American Library Association, Chicago, Illinois
2. At the Secondary-School Level
   a) "In the Classroom," Harold A. Anderson, Teacher of English, University High School, University of Chicago

b) "In the School and Public Library," Leon Carnovsky, Assistant Professor of Library Science, University of Chicago

Saturday Afternoon, June 25

GENERAL SESSION: "Instrumentation in Diagnosis and Remedial Teaching"

Instruments and mechanical devices for use in making diagnoses or in providing remedial training will be demonstrated and their value and limitations considered: (1) *Telebinocular and Tel-Eye Trainer*—Vivienne Ilg, Orthoptist, Chicago, Illinois; (2) *Ophthalmograph and Audiometer*—Helen M. Robinson, Psychologist at the Orthogenic School, University of Chicago; (3) *Metronoscope and Prisms*—Louise Farwell Davis, Director of Research, National College of Education, Evanston, Illinois; (4) *Reading-Film Projector*—Guy T. Buswell, Professor of Educational Psychology, University of Chicago; (5) *Tachistoscope*—William S. Gray, Professor of Education, University of Chicago.

To teachers and school officers and to all others interested in reading problems in elementary schools, secondary schools, and junior colleges, the University extends a cordial invitation to attend the conference. Arrangements have been made for those who attend to visit classes and enjoy other University privileges during the period of the conference without the payment of fees. Room and board will be provided in the dormitories adjacent to the conference rooms from Thursday morning, June 23, to Saturday evening, June 25, for $9.00, including the dinner on Friday evening. Reservations may be made through William J. Mather, Bursar of the University of Chicago. For additional information address William S. Gray, Department of Education, University of Chicago.

WHO'S WHO IN THIS ISSUE

O. L. HARVEY, engaged in research in Washington, D.C. VAUGHN R. DELONG, superintendent of schools at Oil City, Pennsylvania. C. VAN RIPER, director of the Speech Clinic at Western State Teachers College, Kalamazoo, Michigan. WILLIAM A. MILLER, principal of the Butler School, Springfield, Illinois. MABEL RUDISILL, associate professor of education, Western Kentucky State Teachers College, Bowling Green, Kentucky. GERTRUDE HILDRETH, psychologist of the Lincoln School of Teachers College, Columbia University. ELISE H. MARTENS, senior specialist in education of exceptional children at the United States Office of Education.

ENROLMENT TRENDS AND POPULATION SHIFTS

O. L. HARVEY
Washington, D.C.

It has been observed that since 1930 enrolments in the public schools of the United States as a whole, and specifically in the elementary grades, have fallen into a decline. It is argued that this phenomenon is attributable to population shifts; in other words, that the peak in the number of children eligible for enrolment in the elementary grades has been reached and that administrative policies of the future will have to be based on recognition of this fact and gradually be restricted to conform with the changed trend in developments. The purpose of the writer is to analyze some of the factors which determine enrolment changes and to ascertain the validity of this conviction.

That the total enrolments at the elementary-school level have actually declined since 1930 and that enrolments at the secondary-school level are now increasing more slowly than in the recent past is unquestionable. The reasons for the retardation, however, especially for the decline at the elementary level, are by no means clear. Many variables must be considered and their several influences disentangled before a positive assertion can justifiably be made.

Among the major factors influencing changes in school enrolments are the following: (1) population shifts, which basically operate to determine the total number of school eligibles at any given age; (2) school-attendance laws, which determine the legal age limits of admission to school and, especially in their exemption clauses, the legal conditions under which children may be permitted to leave school; (3) economic conditions and social attitudes, which determine school-attendance standards and the strictness with which they are enforced; and (4) administrative policies, provisions, and practices, which determine (*a*) the extent to which adequate provision is made for schooling (for example, accessibility), (*b*) the extent to which adequate personnel is provided for the proper enforcement of

the attendance laws, (*c*) the extent to which the curriculum, teaching staff, and classroom conditions shall in themselves constitute an incentive sufficient to make children want to attend school, and (*d*) the extent to which improved grading and promotional practices are introduced into the schools.

Data relating to total public-school enrolments,[1] by grades, for the period 1911–36 are presented in Table 1. In Figure 1 the same data are presented graphically to indicate the rate of change in enrolments from year to year in each grade. For lack of space it is impossible to reproduce here a table of estimated population at different age levels over the same period of time. The statements made hereafter relating to age peaks are made from an examination of such a table and may be taken to be authentic.

Population estimates prepared by the Scripps Foundation for Research in Population Problems show that the peak year for the five-year-old children was reached in 1927.[2] Peaks for subsequent ages up to nineteen succeeded this date, year by year: for age six in 1928, for age seven in 1929, for age nine in 1931, for age fourteen in 1936, and for age nineteen in 1941.

By contrast with these figures, data on public-school enrolments published by the United States Office of Education show that the peak for Grade I was reached in 1918, for Grade II in 1922, for Grades III and IV in 1924, for Grade V in 1925, and for Grade VII in 1934. Grade VI and Grades VIII–XII had not reached their peaks by 1936.

Now, had trends in enrolments been determined chiefly by population shifts, a direct and almost contemporaneous relation between age peaks and grade peaks could have been expected. Certainly differences in years between age peaks and grade peaks should not have varied so indiscriminately had the former caused the latter.

[1] Private-school enrolments are not available in the same detail or the same degree of accuracy nor for the same period of years as are public-school data. Consequently private-school enrolments are not considered here. They constitute about a tenth of all enrolments and, at least at the elementary level, are distributed throughout the grades in about the same proportions as are the public-school enrolments.

[2] *Population Trends and Their Educational Implications*, pp. 51–52. Research Bulletin of the National Education Association, Vol. XVI, No. 1. Washington: Research Division of the National Education Association, 1938.

TABLE 1

TOTAL ENROLMENTS IN GRADES I–XII IN PUBLIC SCHOOLS OF THE UNITED STATES, 1911–36*

Year	Enrolment (in Thousands) in Grade											
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
1936	3,530	2,558	2,525	2,499	2,433	2,320	2,182	1,740	1,970	1,610	1,249	1,065
1935	3,624	2,595	2,569	2,536	2,433	2,304	2,185	1,730	1,913	1,580	1,229	1,035
1934	3,716	2,632	2,612	2,573	2,433	2,288	2,187	1,721	1,855	1,540	1,209	1,005
1933	3,826	2,704	2,638	2,581	2,448	2,283	2,120	1,701	1,816	1,464	1,138	939
1932	3,930	2,776	2,664	2,589	2,463	2,278	2,053	1,682	1,778	1,387	1,067	872
1931	4,041	2,790	2,698	2,594	2,423	2,267	2,041	1,641	1,702	1,290	973	786
1930	4,151	2,803	2,732	2,599	2,382	2,256	2,030	1,601	1,627	1,192	880	701
1929	4,161	2,810	2,697	2,616	2,409	2,250	2,026	1,596	1,551	1,119	824	661
1928	4,171	2,817	2,662	2,632	2,435	2,243	2,022	1,590	1,476	1,046	768	622
1927	4,074	2,818	2,696	2,647	2,454	2,239	1,974	1,539	1,451	1,025	752	607
1926	3,977	2,820	2,729	2,662	2,473	2,234	1,927	1,488	1,425	1,005	736	592
1925	4,049	2,800	2,730	2,696	2,514	2,186	1,931	1,493	1,424	970	716	541
1924	4,184	2,813	2,796	2,708	2,441	2,121	1,846	1,380	1,328	920	651	490
1923	4,180	2,831	2,756	2,634	2,365	2,089	1,795	1,412	1,271	851	583	426
1922	4,177	2,849	2,716	2,560	2,290	2,058	1,744	1,444	1,214	782	516	362
1921	4,249	2,743	2,607	2,558	2,221	1,974	1,668	1,346	1,065	679	456	337
1920	4,321	2,638	2,498	2,556	2,153	1,890	1,592	1,248	917	576	396	312
1919	4,322	2,623	2,511	2,499	2,141	1,865	1,537	1,195	867	541	369	290
1918	4,323	2,608	2,524	2,441	2,128	1,839	1,483	1,141	816	507	342	269
1917	4,225	2,600	2,504	2,426	2,105	1,814	1,481	1,219	743	476	324	251
1916	4,115	2,585	2,476	2,403	2,076	1,784	1,475	1,293	693	460	317	241
1915	4,043	2,536	2,412	2,341	2,022	1,720	1,419	1,241	639	417	287	219
1914	3,986	2,496	2,374	2,288	1,976	1,664	1,369	1,178	584	384	266	198
1913	3,922	2,468	2,316	2,248	1,910	1,589	1,319	1,133	547	359	248	180
1912	3,876	2,445	2,295	2,212	1,880	1,547	1,281	1,098	501	325	219	156
1911	3,890	2,450	2,301	2,201	1,870	1,523	1,258	1,059	495	309	208	145

* As reported in bulletins of the United States Office of Education.

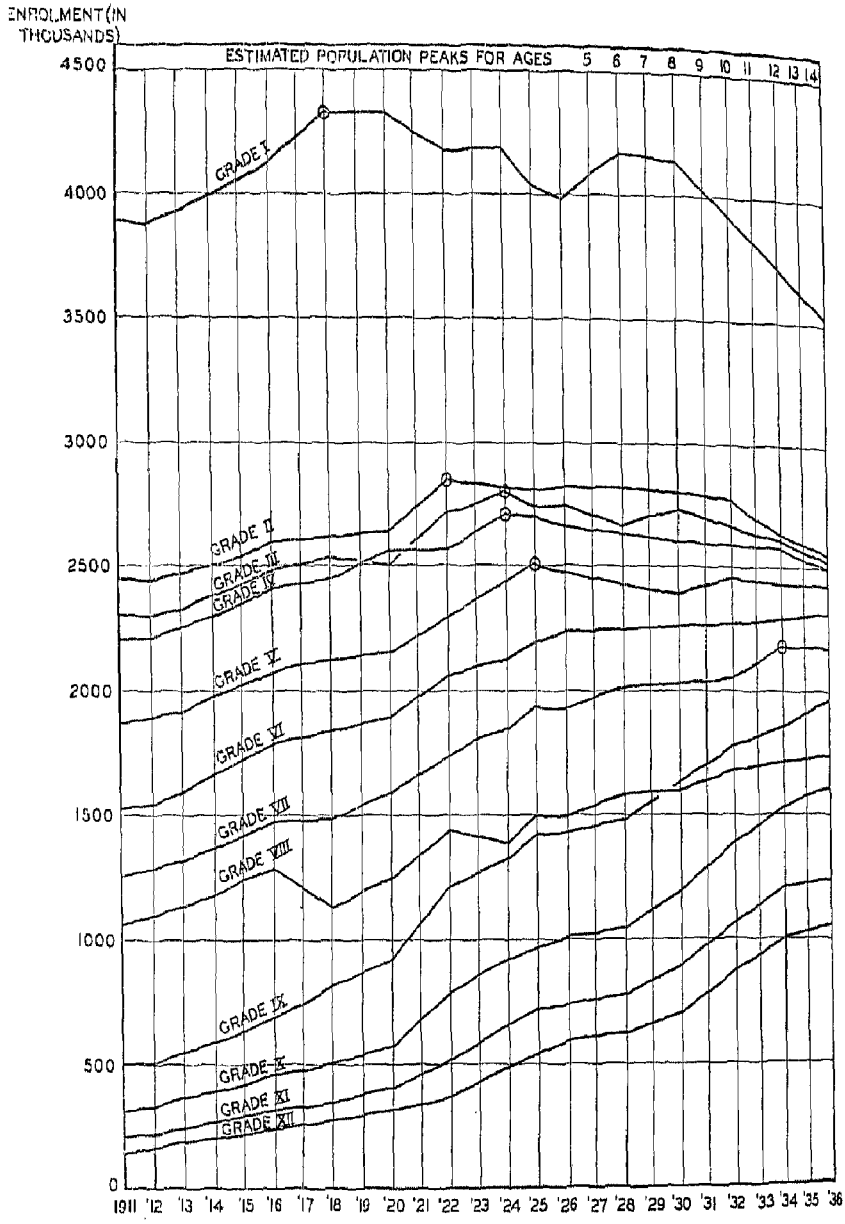

FIG. 1.—Total enrolments in Grades I–XII in the public schools of the United States, 1911–36. Grade peaks are marked with circles except in grades in which enrolments were highest in 1936.

Actually, however, Grades I, II, III, IV, and V all reached their peaks at least two years, and as much as nine years, before the corresponding age peaks, even for age five. Should the early average age of six be assumed for admission to Grade I, with more than usually rapid subsequent advancement at the rate of one grade a year, ending in Grade VII at the age of thirteen, the observed peak year for Grade VII should have occurred in 1935, instead of 1934 when the peak for this grade was actually reached. It is thus evident that enrolment trends, at least with respect to Grades I, II, III, IV, V, and VII have been determined by some influence other than population shifts.

Knowledge of the field of education suggests that these trends are, in the main, evidence of changes in administrative practices, resulting in the more rapid acceleration of pupils through the early grades where they would congest. Evidence to support this conclusion is provided by a comparison of actual enrolments in the early grades with the total number of children in the various age groups ordinarily eligible for these grades. During every year, since at least 1911, the enrolment in each of Grades I, II, III, and IV has been larger than the number of children in any of the age groups of five, six, seven, and nine years, with which these grades may be considered most nearly to correspond.[1] For example, in 1936 the *largest* number of children at any single age in the age group of five to nine years was 2,474,000 at age six. Nevertheless, in the same year, the *smallest* number of pupils enrolled in any one of Grades I–IV was 2,499,000 in Grade IV.

Additional evidence on this point is supplied by the fact that the enrolments in Grade I have been as much as 1.65 times as large as those of Grade II. Even in 1936, with this ratio steadily declining, it was still as high as 1.38.

It is evident, therefore, that there has been congestion of pupils in the earlier grades—an administrative defect which has not yet been overcome—and that the observed trends in enrolments in these

[1] Two minor exceptions occur: Grade IV against age eight in 1930 and 1933; in these years population was greater than enrolment. The differences, however, are slight, and in each case Grades I, II, and III still had sufficiently large enrolments. Probably the inclusion of private-school pupils would suffice to eliminate even these two exceptions.

grades reflect in large measure administrative changes in grading practices.

Despite this argument, the observed downward trend in enrolments in the elementary grades as a whole has persisted since about 1930. Is it not possible that this persistence in itself indicates the presence of population influences underlying the superficial changes in grading procedures? In answer, it should first be noted that this downward trend does not appear at every elementary grade. In point of fact, although enrolments in Grade I are dropping rapidly, those in Grades II, III, and IV are dropping at a much slower rate; Grade V is firm and has been firm for several years; Grade VI is actually rising after a long firm period; Grade VII is slowly dropping after a relatively short firm period; and Grade VIII is actually rising. It would seem that the downward trend is limited in the main to Grades I–IV, which constitute a large proportion (56 per cent) of the entire elementary-school enrolment[1] and in which the principal congestion occurs. The fact that the decline is mainly limited to the first four grades, combined with the further fact that enrolments in all grades, even those which are increasing rapidly, as in the secondary grades, are progressing at a much slower rate than in the recent past, makes it fairly evident that total elementary-school enrolments may be expected to decline. However, as the evidence presented above indicates, the downward trend itself would seem to represent, in very large part, the effects of improved grading procedures; the congestion persists but the degree of congestion is becoming less.

As against the decline due to improved grading and promotion policies is the evidence of attendance data. The United States Census of 1930 indicates that not all eligible children are attending school. Only 20 per cent of the five-year-old children, 66 per cent of the six-year-olds, and 89 per cent of the seven-year-olds had attended school of any kind during the seven months preceding the date of the census (April 1). Even among children eight to fourteen years old, the percentages ranged only from 93 to 98.[2] We know

[1] *Biennial Survey of Education, 1932–1934*, chap. ii, p. 8. United States Office of Education Bulletin No. 2, 1935.

[2] *Abstract of the Fifteenth Census of the United States*, Table 125, p. 262. Fifteenth Census of the United States: 1930.

that attendance laws are being more strictly enforced, as comparison of attendance data of 1930 and 1920 reveal. Yet, despite improved attendance, still further improvements are possible, especially at the lower school-age levels. Actually the expectation would be that, with still stricter enforcement, enrolments in the early grades should increase.

It is impossible to determine from these data what influence the economic depression has had on enrolment trends at the elementary-school level. It should be noted, however, that child-labor laws affecting the school-leaving age have become firmer and that children of tender years and low educational qualifications are less welcome than formerly in industry, the result being that there is a tendency for pupils to congest at Grades VI–IX.[1] Unfortunately, the depression commenced at about the same time as the downward turn in population shifts, with the result that it is almost impossible to disentangle the influence of the one from the other and determine their relative significance. In terms of the evidence already submitted, however, it would seem reasonable to contend that as yet there is no adequate proof that the decline in elementary-school enrolments or the slowing-up in the rate of increase in secondary-school enrolments is a result of population shifts. Consequently, so far as the immediate future is concerned, we should perhaps look for the causes of major changes in administrative practices, school-attendance laws and the extent to which they are enforced, and the possible effects of economic trends.

Improved grading and promotion practices should relieve congestion and result in a subsequent diminution of enrolments in the earlier grades at the elementary level. Such practices should result in a temporary increase—a sort of peristaltic wave—throughout the successive grades to at least Grade IX. On the other hand, the economic demand for older children of higher educational achievement should result in increased enrolments in the more advanced elementary grades and probably in a shift of the crucial point of congestion from Grades I–III to Grades VII–IX. Meanwhile, the un-

[1] The observed increase of enrolments in Grade IX over those in Grade VIII results, in large part, from the transfer, especially during the depression period, of private elementary-school graduates into the public secondary schools.

doubted influences of population shifts will assert themselves, tardily at first because obscured by changes due to administrative practices, but more and more obviously and more and more drastically, until they constitute the predominant obvious cause of the decline in enrolments throughout the grades.

Prediction is usually unwise and always subject to adverse comment. The following ideas, therefore, represent no more than one man's opinion. If they merely arouse discussion and further probing of the facts, they will have adequately served their purpose. Much more detailed research is needed before even a crude understanding of the problem of enrolment trends can be assumed. Especially necessary is it that intensive studies of trends in the individual states be made, with special observations of differences between urban and rural groups and between white and negro populations.

The predictions are submitted in the form of "anticipations"—a way of avoiding the indictment of false prophecy. They are limited to the next five or ten years and depend on a whole group of implicit assumptions, which to the initiated call for no exposition.

Grade I will continue to drop in enrolments. Grades II, III, and IV will firm and remain firm for several years before declining. Grades V and VI will slowly rise, firm, and then fall. Grades VII and VIII will rise somewhat more rapidly than Grades V and VI, but not more rapidly than at present, and then swiftly fall. Grade IX, which, for reasons given, has recently exceeded Grade VIII, will firm for a while and then, as the depression lets up, will once more drop below the level of Grade VIII. Grades X–XII will continue to rise, though not so rapidly as at present. In summary, elementary-school enrolments will slowly rise again, will firm for a few years, and then turn to a decline. Secondary-school enrolments will continue to rise for several years before firming and will commence to decline only after the decline at the elementary-school level has shifted up into the secondary grades. Total enrolments will slowly rise for several years, firm for a short period, and then commence on a decline corresponding to that in the population of school age.

PRIMARY PROMOTION BY READING LEVELS

VAUGHN R. DELONG
Public Schools, Oil City, Pennsylvania

Achievement in reading and its relation to promotion, especially in the primary grades, has been a constant concern to many educators. The increasing mass of reading material which is to be found in school and in our daily lives makes reading more important than ever before. Since good reading must be built on a foundation vocabulary, it is of the utmost importance that such a vocabulary be well established in Grades I and II.

Only recently has this wealth of reading material begun to make itself felt in the primary field. It was only natural, therefore, that the problem of establishing a vocabulary was met by having each pupil read the same book again and again. This repeated exposure may have aided in fixing word recognition, but it also led to memory reading and introduced failure into the school system. The effect of failure on the pupil became noticeable, and the conviction developed that it should be eliminated if at all possible.

The most spectacular departure from the custom of repeated failure until the basic vocabulary was established is found in the plan of chronological promotion now in use in some schools. Under this system all pupils are promoted regardless of achievement. The sense of failure is eliminated but so also is any semblance of achievement as a goal of the school; the entire reading structure is weakened. The system also tends to increase the number of levels of reading ability to be found among the pupils of any particular grade. To the extent that it increases this number, the difficulties of teachers of subjects depending on reading ability are multiplied.

The writer, while he was serving as superintendent at Ellwood City, Pennsylvania, gave a great amount of thought to the devising of a scheme which would retain the mastery of a basic vocabulary as one of its chief goals but which would eliminate failure of promotion and needless re-reading of particular stories in certain books as

the necessary means of accomplishing this end. Several experimental attempts to solve the problem were made, but each was dropped because it did not measure up to the standards which were found to be necessary if such a plan was to be practical. The experimentation, however, had the value of clarifying these requirements, and it resulted in a definite formulation of the standards which such a plan must satisfy. These were found to be: (1) mastery of a basic vocabulary as one of the chief goals of primary reading; (2) little or no repetition of reading material by slow pupils; (3) a scientifically established means of determining the level of difficulty of available reading materials; (4) simplicity, in order that additional burdens would not be imposed on the primary teacher; (5) the acceptance of the plan by parents as a fair and reasonable method; and (6) the imposing of little or no handicap on children entering or leaving the school system.

CLASSIFICATION OF MATERIALS BY LEVELS

In the early experimentation there had been no consideration of doing away with the terms "Grade I" and "Grade II," and the work had not been based on any scientifically established means of determining the level of difficulty of the reading material. The lack of such scientific determination was the main reason for the abandonment of early plans. A solution of this problem, however, was found in the use of the reading levels set up by Stone in his recently published book,[1] in which he suggests eight reading levels for the first three grades. The vocabulary for these levels was selected on the basis of the range of use in twenty-nine primers, twenty-seven first readers, twenty second readers, eleven third readers, the Gates list[2] the Wheeler-Howell list,[3] Horn's list,[4] and the International

[1] Clarence R. Stone, *Better Primary Reading*. St. Louis, Missouri: Webster Publishing Co., 1936.

[2] Arthur I. Gates, *A Reading Vocabulary for the Primary Grades*. New York: Teachers College, Columbia University, 1926.

[3] H. E. Wheeler and Emma A. Howell, "A First-Grade Vocabulary Study," *Elementary School Journal*, XXXI (September, 1930), 52–60.

[4] Ernest Horn, *A Basic Writing Vocabulary*. University of Iowa Monographs in Education, No. 4. Iowa City, Iowa: College of Education, University of Iowa, 1926.

Kindergarten Union list.[1] The vocabulary was graded by levels on the basis of trends in usage. For each level there were also set up definite standards of attainment in various reading abilities. The plan of instruction in reading according to a child's readiness for a particular reading level rather than according to grade placement seemed to open the door to a workable solution. A comparison of the plan set forth below with the levels set up by Stone will show a few minor differences, but the idea of the levels and their details forms the nucleus around which the plan was built.

The first step in making the change was to analyze the available reading materials in Grades I and II. A survey disclosed that there were sets, of from six to forty copies each, of twenty-seven pre-primers, thirty-four primers, forty-four first readers, and twenty-eight second readers. A vocabulary count of each book was made which showed the number of words at each level and also the words that are not given in Stone's list. From this word count the percentage of words at each level was determined for each book. The following standards were then set up for the classification of books by levels: Level I, pre-reading work; Level II, books in which 70 per cent or more of the words are on Level II; Level III, books in which 50 per cent or more of the words are on Level II and 65 per cent or more of the words are on Levels II and III; Level IV, books in which 40 per cent or more of the words are on Levels II and III and 60 per cent or more of the words are on Levels II, III, and IV; Level V, books in which less than 60 per cent of the words are on Levels II, III, and IV and 70 per cent or more of the words are on Levels II–V, inclusive; Level VI, books in which 50–70 per cent of the words are on Levels II–V, inclusive, and 70 per cent or more of the words are on Levels II–VI, inclusive. Table 1 gives a distribution of the available books according to these levels.

After every book had been placed at a particular level, attention was given to the repetition of words in each book, and the teachers examined the books available to them to ascertain what sequence

[1] Child Study Committee of the International Kindergarten Union, *A Study of the Vocabulary of Children before Entering the First Grade*. Washington: International Kindergarten Union (1201 Sixteenth Street, N.W.), 1928.

of material would introduce the least number of new words from unit to unit and from book to book.

Because the procedure that we had in mind was a distinct departure from current practice and from the custom which had always been followed, it was deemed advisable to spend one semester in experimental practice before a formal adoption of the proposed plan. Consequently, without any official change in the promotional basis, all children in Grades I and II were considered by their teachers

TABLE 1

CLASSIFICATION OF AVAILABLE BOOKS ACCORDING TO WORD LEVEL

Level	Preprimers	Primers	First Readers	Second Readers	Total
Not checked*	4	7	13	8	32
Above Level VI	...	...	...	6	6
Level VI	...	...	...	14	14
Level V	...	...	16	...	16
Level IV	...	11	15	...	26
Level III	8	16	...	...	24
Level II	15	...	...	...	15
All levels	27	34	44	28	133

* Some books were not checked because they were too old.

to be on a certain reading level. In the first classification each child continued on the level of the material which he was reading at the beginning of the experiment. A careful record was kept of the time at which each pupil began and finished each book, his transfer from one group to another, and the type of work that he did on each book. This experimentation served to familiarize each teacher with the possibilities of the plan, to show possible weaknesses and remedies for them, and to make possible the definite formulation of a new promotional plan. At the conclusion of the experimental semester the primary teachers voted unanimously to recommend the formal adoption of the plan, and it was adopted, as recommended, by the Board of Education of Ellwood City.

PROVISIONS OF THE PLAN

The eight provisions of the plan will now be set forth and explained.

1. Abolish promotion and failure in the first two grades. A pupil entering school will enter the primary department and will continue in this department until he is promoted to Grade III. During this primary period he will be subject to transfer from one group to another.

2. Pupils entering school will be tested for reading readiness and intelligence. Those ready to begin reading will immediately receive instruction in reading. Those not ready for reading will be given pre-reading work in order to prepare them for reading.

3. Pupils in the primary department will be grouped in small groups, not to exceed approximately fifteen members.

4. Each reading book in the primary department will be placed on one of six reading levels according to the levels set up by Clarence R. Stone in his book *Better Primary Reading*.

5. Groups of pupils or individual pupils will progress from one level to another as they demonstrate their fitness.

6. Fitness for progress to a higher level will be determined by tests and by the following number of books to be read satisfactorily on each level: Level I, pre-reading work; Level II, 4–6 books (average, 5); Level III, 4–6 books (average, 5); Level IV, 3–6 books (average, 4); Level V, 2–4 books (average, 3); Level VI, 2–3 books (average, 2).

7. Pupils who do not meet these standards will be transferred to another group on the same level and read different books from those previously read until they are ready to progress to a higher level.

8. Pupils will be promoted to Grade III at the end of each semester as at present.

The second provision is extremely important for it begins immediately to give attention to the individual needs of every pupil. We continued the use of a primary intelligence test and a reading-readiness test which we had been using and the scores of which had meaning for us. Pupils are divided tentatively into three groups as a result of these tests. Pupils having satisfactory scores on both tests begin work immediately on Level II. Pupils who make low scores on the reading-readiness test but show satisfactory intelligence scores are placed on Level I and work with pre-reading material. The need for material of this type is being rapidly recognized by leading publishing companies, and it is now possible to secure all the material that is necessary. Pupils who make low scores in both intelligence and reading readiness are tested by the Stanford Revision of the Binet-Simon Intelligence Scale. If this test confirms the group intelligence test, the pupils are placed in a subnormal

group and enter a corresponding type of work. If the individual test shows the result on the group test to be in error, the pupil is placed in a group at Level I.

The groups mentioned in Provision 3 are made up of those pupils who are about equal in ability. Classes average thirty-four pupils, and it is suggested that there be not more than three groups in a class. However, in some cases teachers use more than this number.

The variation in Provision 6 in the number of books to be read by each pupil on each level is another provision to allow for individual differences. The more difficulty a child has in learning to read, the more material he needs at a particular level to meet successfully the standards of that level. For instance, a child who reads four books on Level II before he begins to read satisfactorily, will read four others in a satisfactory manner, or a total of eight books on that level. On the other hand, the pupil who reads well and progresses rapidly will read six books satisfactorily before going on to Level III. Thus, the better reader is required to read more books satisfactorily in order that he may not move ahead too rapidly, but he does not cover so great a number of books as the slow pupil, who needs the larger amount of reading experience. The tests used for determining readiness for a higher level will be discussed later.

The seventh provision is one of the distinctive features of the plan, for by this means, it is hoped, repetition of materials will be eliminated. These groups of pupils in the primary department may be thought of as traveling in different sections of the same train. Let us suppose that John starts to school and that he is placed in Section 1 of the train. It is discovered that he cannot move so rapidly as the others in that section, and he is transferred to Section 2 where the children are reading on the same level (Level II for pupils just starting to read). This group completes their five books satisfactorily and are ready to go on to Level III; but, since John has read only four books, he would be transferred to Section 3, which would then read other books than those that John had read. It can be seen, by reference to Table 1, that fifteen books are available at this level; consequently there is not much possibility of inadequacy here. This possibility is further lessened if pupils have been held on Level I until they are ready to read. When John completes his fifth book, Section 3 may be ready to go on. If so, he

would remain with them; if not, he would be transferred to a section which is reading on Level III.

The eighth provision requires that pupils completing Level VI during any semester will continue to read other books on that level until the end of the semester. Any other plan would upset the organization in Grade III, where this program is not in effect.

Provision 6 also states that tests are one of the criteria used to determine fitness for progress to a higher level. It would have been possible to use only standardized reading tests for this purpose, but it was felt that we could get a better measure of achievement in our program if we made tests based specifically on the vocabulary and the aims set forth for each level. Consequently experimentation on such tests was carried on concurrently with the other experimentation. As a result, a test has been devised for Levels II and III and another for Levels IV, V, and VI.

Division 1, for Levels II and III, consists of eight parts with a total of 116 questions. Part A tests the ability to choose, from three possible answers, the proper answer to a question read orally by the teacher. Part B tests recognition of individual words from pictures. Part C, similar to Part B, tests phrases. Part D is a picture test for recognition of the initial sounds of *s*, *m*, *h*, *b*, *p*, *f*, *c* (hard sound), *w*, *g* (hard sound), *r*, *t*, *d*, *j*, *l*, *n*, *k*, and *th*. Part E tests recognition of variants of known words made with *s*, *ing*, *es*, and *ed*. Part F is a picture accompanied by directions for coloring. Part G tests recognition of rhyming words. Part H is a test of ability to recognize single words when pronounced orally.

Division 2, for Levels IV, V, and VI, also consists of eight parts similar to those used in Division 1, but it uses words listed on Levels IV, V, and VI and tests the aims of these levels. Part A is a word test from pictures. Part B uses phrases and pictures. Part C consists of sentence directions, and sentences to be used with "yes" and "no" answers. Part D is composed of paragraphs followed by three multiple-choice questions. Part E is a picture test of initial sounds: *sh*, *st*, *wh*, *gr*, *y*, *ch*, *cl*, *pl*, *fl*, *bl*, *cr*, *br*, *dr*, *tr*, *fr*, *ea*, *v*, *qu*, *sw*, *sp*, *sl*, *sm*, *su*, and *tw*. Part F is a test of ability to recognize new words by comparison with similar elements of known words; part of this test uses pictures and part of it is oral recognition. Part G tests recognition of variants of known words formed with

y, er, est, en, n, ies, and *ied.* Part H tests recognition of words from oral pronunciation. In this part, words commonly confused are placed in the same question.

Norms for these tests are being developed for each level, and the use of the norms is an integral part of the plan. It is not expected that comparison with these norms will ever be the final consideration, but it is expected that scores on these tests will serve to confirm teachers' judgments and also to indicate how well the standards set up for each level are being accomplished.

RECORDING AND REPORTING PROGRESS

It can readily be seen that this system calls for a different type of record card and of report card for the parents. The report card

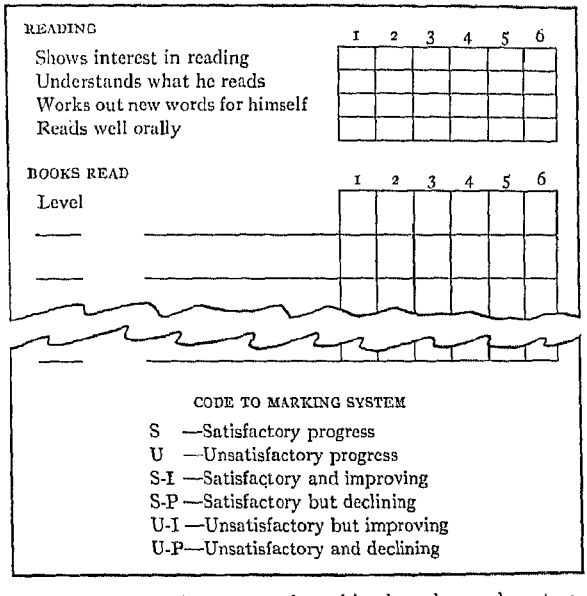

FIG. 1.—Portion of report card used in the primary department

is most important because, after all, the approval of the parents is necessary if anything is to be a success in the public schools. A portion of the report card which was devised is illustrated in Figure 1. It can be seen that this report card gives the parent information about his child's reading and also provides a cumulative record of the books read, the levels of their difficulty, and the type of work

done on each. Twelve lines are provided on which the books read may be listed as work is begun on each. Marks appear in the appropriate column for all books being read during the six-week report period. A letter explaining in detail the various steps of the plan and the requirements for progress to another level is inserted in the envelope with the report card, so that the parent is fully informed at all times of his child's exact standing. This report card has had a beneficial effect on the reception of the entire change by the parents.

The school record card is similar except that it provides space for the entire primary period of each pupil and goes with him from one teacher to another.

EVALUATION AND SUMMARY

1. Six requirements for a satisfactory primary reading plan were set up. The explanation of the plan shows that it retains mastery of a basic vocabulary as one of the chief goals of primary reading, that it eliminates much repetition of material, that it is based on a scientifically established means of determining the level of difficulty of reading materials, and that there is nothing in it which will involve a great amount of additional work for the teacher. Experience with the plan has not disclosed any misunderstanding on the part of parents concerning the manner in which it operates. It is not anticipated that any difficulty will be experienced in transferring pupils to another school system. Pupils entering this system will be placed on their proper reading levels. Those leaving for other systems will be given grade-placement ranks when they leave.

2. The plan does not conflict with any particular type of organization. It can be used if one teacher has the pupils throughout the day, or it can be used in a departmental organization where a reading teacher has more than one group of pupils. The plan has been thoroughly discussed with several leading exponents of the activity school, and they can see no reason why it is not adaptable to an activity program.

3. This plan involves no more cost than the regular primary reading plan, yet it provides a wealth of material. Books are not bought in quantities sufficient for an entire group but are bought in lots of twelve or fifteen. This procedure permits the purchase of two or three titles for every one that could be purchased in the other way.

PERSISTENCE OF BABY TALK AMONG CHILDREN AND ADULTS

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Every teacher of speech correction has frequently been confronted by the parent who, dragging her reluctant child into the office, asks breathlessly, "My son talks baby talk, and the doctor said he would outgrow it, but that was a year ago and he still says *muvver* for *mother*. Is it true that he will outgrow it?" Since the same question is as frequently, although more calmly, asked by elementary-school teachers, this article will attempt to answer it.

What is baby talk? The term is generally used loosely to include any type of substitution, omission, or distortion of the speech sounds. When used more exactly, it includes only those cases in which no organic defect is a causal factor and in which there is no other evidence of mental or physiological retardation. In other words, "baby talk" is the articulatory disorder due to delayed or interrupted speech maturation. There is no pathology. The child's organs used in speech are normal, and other children of the same age speak without the omissions, distortions, and sound substitutions that make his speech peculiar and unintelligible.

An examination was made of the records of sixty cases diagnosed as baby talkers. Only persons who were seven years of age or older were included, since several researches have indicated that normal children do not commonly acquire complete mastery of all the speech sounds until that age. The sequence of complete acquisition is as follows: first, the lip sounds, *p*, *b*, and *m* (one to three years); then the simple tongue-tip sounds, *t*, *d*, and *n* (three to four years); then the back-tongue sounds, *k*, *g*, and *ng* (four years); then *f* and *v* (five and a half years); then the complicated tongue sounds, *s*, *r*, *l*, *ch*, *j*, and *y* (six and a half to seven years); and finally the blends, such as *str*, *gl*, and *cr* (seven years).

Of these sixty cases, thirty-three were brought or sent to the

speech clinic at the instigation of teachers or school authorities, twelve by parents independently of school instigation, three by physicians, and twelve were adults who asked for examination themselves. The age range was from eight to forty-seven years. A distribution of the ages is given in Table 1. The significance of the data in this table is not so much that baby talk tends to be outgrown when the individual matures (although, of course, a large number of persons certainly do outgrow it) but that the disorder can and often does continue to exist throughout life. Baby talk, then, is not always outgrown. As a matter of fact, the chances are that, if the child

TABLE 1

DISTRIBUTION, ACCORDING TO AGE, OF SIXTY PERSONS DIAGNOSED BY A SPEECH CLINIC AS BABY TALKERS

Age	Number of Cases	Age	Number of Cases
8	21	30–39	2
9	14	40–47	2
10–14	9		
15–19	5	Total	60
20–29	7		

has not outgrown it by the age of ten (the age at which the decrease in cases begins to level off), he will, unless he receives special remedial work, continue to be afflicted by the disorder for the rest of his life. Physicians who indiscriminately advise parents and teachers to let nature take care of the problem are not in possession of the facts, and teachers who have pupils with such speech should make an attempt to eliminate the disorder as early as possible.

The records of the articulatory tests were next analyzed to determine which sound substitutions, omissions, and distortions were most frequent. It was found that errors on blends (especially those of the more complex co-ordinations, such as *str* or *thr*) constituted 68 per cent of all errors and were more frequent than errors on simple sounds. It was also clear that the sounds presenting the most errors were those which appear last in the speech development of the normal child, a fact which will be evident when the data in Table 2

are compared with the stages of speech acquisition given earlier in this article.

Further analysis of the same data showed that the errors occurred most frequently when the unblended sound was placed in the initial position of words (43 per cent of the total number of errors), next in

TABLE 2

SPEECH ERRORS OF SIXTY PERSONS DIAGNOSED BY A SPEECH CLINIC AS BABY TALKERS*

Error	Number of Cases
Blends with:	
r	56
s	52
l	47
th	21
k	11
g	11
f	8
v	7
Single sounds:	
s	50
r	37
l	36
ch	24
th	22
k	17
g	17
f	15
v	15

* Errors made by fewer than five of the cases are not included.

the medial position (31 per cent), and least frequently (26 per cent) in the final position. Exceptions to this general statement were the errors on *r* and *l*, which were most frequent in the final position. It was further found that the types of errors differed with age, the older persons exhibiting more distortions and fewer omissions or substitutions than did the children of less than ten years.

Careful and thorough case histories, of the type suggested by Travis,[1] were made and analyzed in an attempt to determine what

[1] Lee Edward Travis, *Speech Pathology*, pp. 70–76. New York: D. Appleton & Co., 1931.

factors might be responsible for the delayed maturation. Since some of the subjects could not give adequate early histories and others listed more than one causal factor, the totals do not equal the number of cases. The causes of the baby talk, insofar as they could be determined from the case histories, were: lack of proper speech standards in the home, 24 cases; imitation of parental baby talk or association with other baby talkers, 17 cases; retarded dental, physical, or co-ordinative development, 21 cases; frequent or prolonged illness during the first two years of life, 18 cases; low mentality, 6 cases; lack of a handedness preference, 5 cases; isolation and lack of speech stimulation, 4 cases; birth injuries and endocrine disturbances, 3 cases; pronounced negativism, 2 cases.

These causes indicate the great need for the possession of reliable information by teacher and parent and for their co-operation in the prevention and the eradication of speech disorders during the early years. If parents and teachers realized the great amount of time and effort needed to correct baby talk in an adult, if they could witness the social morbidity and the economic handicap of adults so afflicted, they would not trust to luck or nature to see that the child would outgrow his speech errors. As any speech teacher knows, few habits are so powerfully laid down or fixed as are those of speech. Fortunately the teachers' colleges and the public schools are realizing that speech is too important a tool to neglect, and gradually but surely they are accepting the responsibility for the improvement of speech.

READING WITH AND WITHOUT PICTURES

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INTRODUCTION

The modern primary reader is copiously illustrated, while the books of a generation ago had relatively few pictures. A comparison between the older and the more modern books shows that the present tendency is toward the use of a greater number of illustrations. The publishers of primary readers have increased the quality and the quantity of illustrations, probably in the belief that the books are thereby improved and made more useful.

There has also been a change in the technique of picture-making. The black-and-white illustrations and line drawings have been replaced by one-color and two-color pictures, which in turn have been supplanted by pictures in natural colors. Evidence is available showing the techniques of picture-making which are preferred by primary children.[1]

There are arguments both for and against the use of illustrations in primary readers. It is said that bright pictures make a book attractive to children who are beginning to read, and studies of children's choices of books verify this statement.[2] Teachers feel that pictures are necessary in primary readers. When one hundred teachers were asked if they thought children could learn to read by means of books without illustrations as well as by means of books with illustrations, the answer was invariably "No."[3] The teachers explained that pictures are necessary to introduce characters in the story, to arouse and sustain interest, to clarify unfamiliar concepts

[1] William A. Miller, "The Picture Choices of Primary-Grade Children," *Elementary School Journal*, XXXVII (December, 1936), 273–82.

[2] Florence E. Bamberger, *The Effect of the Physical Make-up of a Book upon Children's Selection*. Johns Hopkins University Studies in Education, No. 4. Baltimore: Johns Hopkins Press, 1922.

[3] William A. Miller, "Teacher Opinion of the Value of Illustrations in Primary Readers." Unpublished study, 1935.

appearing in print, and to furnish clues to word recognition. These teachers also felt that well-illustrated books are more attractive and interesting to children.

There is, however, no lack of arguments against the use of pictures in primary books. One artist has expressed opposition to illustrations in children's readers.[1] In one school system duplicate copies of first-grade material with no illustrations were read by the children with no apparent lack of interest.[2] Many teachers use reading charts which are based on the experiences of the children. Although these charts have no illustrations, they are read with interest. Unless there is only a line or two of reading material on a page, the illustration usually does not carry clues to all the ideas expressed on the page. In fact, it is probable that many illustrations leave much to be desired in furnishing clues to the reading material which they accompany. Anyone who has watched beginning readers at work has seen them shift their eyes from a printed word which they did not recognize to the picture, trying to get a clue to the word from the picture. Such shifting of the attention is considered by some persons to be an interference with reading.

ORGANIZATION OF THIS INVESTIGATION

Purpose of this investigation.—The purpose of this study was to determine whether children who read a basal set of primary readers with the accompanying illustrations secure greater comprehension of the material read than do pupils who read the same material without the accompanying pictures.

Source of data.—About one hundred children in each half of the first three grades furnished the data for this study. These six hundred children were enrolled in three of the elementary schools of Springfield, Illinois. Fifteen teachers participated in the experiment.

Just prior to the beginning of the second semester in January, 1937, the six hundred children were given standardized reading tests. Pupils in Grades I and II took the Gates Primary Reading Test, and the third-grade pupils took the reading section of the

[1] Mangravite Peppino, "The Artist and the Child," *Progressive Education*, III (April–May–June, 1926), 119–33.

[2] William A. Miller, "Teaching First-Grade Children To Read without the Aid of Pictures." Unpublished study, 1936.

Stanford Achievement Test for Primary Grades. The class of each teacher was then divided into two groups of equal reading ability, as shown by the test scores. Hereafter these groups will be referred to as the "picture group" and the "non-picture group."

A widely used series of primary readers was selected as the basal textbook in reading. All material in the book for a given half-grade was read during the semester. In half of the books all pictures were permanently covered by pasting paper over them. The non-picture group used these books. The picture group used books as they came from the publisher, with all pictures uncovered.

Two bases of comparison were used. The first comparison involved the use of individual stories or selections as they appeared in the textbook at each half-grade level. In each case the picture group read three stories with the pictures, and the non-picture group read the same three stories without the pictures. Tests were prepared on each of these three stories in each half-grade. Each test consisted of several parts. Children were required to choose, from a group of words, a word spoken by the teacher; to select a phrase from two phrases when one phrase was spoken by the teacher; to cross out an extraneous word from a group of three words; to complete sentences after reading a paragraph; and to put in proper sequence the happenings recorded in a paragraph to be read. No words, ideas, sentences, or concepts were used in the tests unless they occurred in the material in the basal reader on which the tests were based. The means made by the two groups on these tests are used for comparative purposes.

The reliability for nine of the tests was established by giving them to one hundred pupils on two successive days. The coefficients of reliability secured in this manner ranged from .60 to .94.

Immediately before the reading of a given story, the test for that story was administered to both the picture and the non-picture groups. Immediately after the conclusion of the reading, the test was given again.

An effort was made to control all factors in the learning of the children except the use of pictures. Both groups had the same teacher and read the same materials. Both groups used the same amount of time. The same procedure in teaching both groups was used ex-

cept for the use of pictures for the non-picture group. All testing was done by the teachers.

The second comparison involved measurement in terms of all the material in the book presented to a given half-grade for the entire semester. For this purpose tests were constructed of the same nature as those used for the individual stories but containing more items. These tests were given at the beginning of the semester before any reading in the books was done and again at the close of the semester when all the material in the basal textbook had been read.

When all testing was completed, the scores for the two groups in each half-grade were matched on the basis of the pretest on each story and the semester material. For the distribution of scores on any given test, the mean, its standard error, and the standard deviation were computed.[1] These measures are used for purposes of comparison.

RESULTS OF INVESTIGATION

The performance of the groups on individual stories is compared in terms of pretest and retest scores. Data not given here show that, of eighteen possible chances for statistically significant gains, the picture group made ten such gains and the non-picture group made twelve.

The most important comparison in terms of individual stories is that made between the retest scores of the two groups. Comparisons between the means of the picture group and of the non-picture group on the pretest and the retest at each half-grade level are shown in Table 1.

Examination of the table shows that, with one exception, both groups were practically of equal ability on the pretests. This fact means that both groups were on an equal footing in their approach to the task of reading the material upon which they were to be tested. The table shows also that any difference between the two groups on any retest is statistically insignificant. These data indicate that neither group was superior to the other on any of the eighteen stories.

It will be remembered that both groups at each of the six half-grade levels were given a pretest covering all the material to be read

[1] For the formula used, see: Charles W. Odell, *Statistical Method in Education*, p. 351. New York: D. Appleton-Century Co., Inc., 1935.

TABLE 1

PRETEST AND RETEST SCORES ON THREE STORIES IN EACH HALF OF GRADES I–III MADE BY GROUPS TAUGHT TO READ WITH AND WITHOUT PICTURES IN TEXTBOOKS

Story and Test	Number of Pupils in Each Group	Mean Score		Standard Deviation		Standard Error of Mean		Difference in Means in Favor of Picture Group	Standard Error of Difference
		Picture Group	Non-picture Group	Picture Group	Non-picture Group	Picture Group	Non-picture Group		
	First Half of Grade I								
Story 1:									
Pretest.....	39	26.23	26.23	5.26	5.26	.44	.34	0.00	.....
Retest.....	39	29.38	29.56	6.00	6.02	.44	.38	− .18	.66
Story 2:									
Pretest.....	40	15.90	15.25	7.38	7.14	.60	.46	.65	.....
Retest.....	40	19.92	19.90	8.49	8.08	.79	.50	.02	.76
Story 3:									
Pretest.....	32	15.09	15.12	7.47	7.91	.05	.34	− .03	.....
Retest.....	32	18.09	18.00	8.11	7.13	.06	.30	0.09	.05
	Second Half of Grade I								
Story 1:									
Pretest.....	37	22.43	22.70	4.67	4.49	.57	.53	−0.27	.....
Retest.....	37	24.51	25.70	4.61	4.71	.53	.56	−1.19	.75
Story 2:									
Pretest.....	32	23.34	23.43	5.25	5.19	.68	.36	− .09	.....
Retest.....	32	26.15	25.15	4.63	4.75	.69	.36	1.00	.71
Story 3:									
Pretest.....	34	21.91	21.91	5.69	6.34	.58	.84	.00	.....
Retest.....	34	24.93	24.44	4.91	6.51	.50	.87	0.49	.85
	First Half of Grade II								
Story 1:									
Pretest.....	39	27.33	25.76	4.26	4.29	.36	.41	1.57	.....
Retest.....	39	27.38	26.52	3.19	3.87	.27	.60	.86	.89
Story 2:									
Pretest.....	36	23.47	23.41	3.63	2.84	.36	.42	.06	.....
Retest.....	36	24.83	25.84	3.20	2.68	.32	.40	−1.01	.44
Story 3:									
Pretest.....	36	24.72	24.52	4.60	4.82	.52	.41	.20	.....
Retest.....	36	26.72	26.19	3.61	4.42	.40	.38	0.53	.52

TABLE 1—*Continued*

Story and Test	Number of Pupils in Each Group	Mean Score		Standard Deviation		Standard Error of Mean		Difference in Means in Favor of Picture Group	Standard Error of Difference
		Picture Group	Non-picture Group	Picture Group	Non-picture Group	Picture Group	Non-picture Group		
	Second Half of Grade II								
Story 1:									
Pretest.....	46	24.67	24.76	4.90	4.48	.04	.43	−0.09	.....
Retest.....	46	25.87	26.48	4.62	5.35	.40	.52	− .61	.55
Story 2:									
Pretest.....	46	25.00	24.91	5.06	5.20	.48	.03	.09	.....
Retest.....	46	26.11	26.75	4.86	4.27	.45	.25	− .64	.89
Story 3:									
Pretest.....	46	24.29	24.25	4.29	5.03	.28	.40	.04	.....
Retest.....	46	25.07	25.43	4.43	4.83	.30	.39	−0.36	.45
	First Half of Grade III								
Story 1:									
Pretest.....	41	25.97	25.97	4.14	4.20	.47	.35	0.00	.....
Retest.....	41	27.46	27.34	4.21	3.48	.47	.29	.12	.17
Story 2:									
Pretest.....	40	25.90	25.90	3.54	3.50	.47	.27	.00	.....
Retest.....	40	27.22	27.15	2.92	3.41	.38	.28	.07	.93
Story 3:									
Pretest.....	44	25.56	25.56	3.26	4.09	.28	.43	.00	.....
Retest.....	44	25.91	26.29	3.87	3.96	.32	.41	−0.38	.49
	Second Half of Grade III								
Story 1:									
Pretest.....	53	28.29	28.06	3.11	2.95	.35	.34	0.23	.....
Retest.....	53	28.84	29.55	3.13	2.28	.36	.27	− .71	.37
Story 2:									
Pretest.....	51	27.31	27.31	3.82	4.03	.43	.35	.00	.....
Retest.....	51	28.80	28.82	2.93	3.11	.33	.27	− .02	.41
Story 3:									
Pretest.....	50	26.54	26.54	3.29	3.46	.40	.39	.00	.....
Retest.....	50	27.78	28.06	2.93	4.08	.36	.46	−0.28	.57

in the text during the semester, as well as the three stories. The picture group read all the material with the pictures exposed. The non-picture group read the same material with all pictures covered. At the conclusion of the reading, retests were administered.

Data not given here show that at the beginning of the semester the two groups at any given half-grade level started on an equal footing and that by the close of the semester both had made statistically significant gains in comprehension of the material read in the basal textbook. However, none of the differences between the means of the two groups on the retests was statistically significant. The groups approached the semester's work with equal ability. At the close of the semester's work the groups were equal in comprehension of the material read in the basal reader.

CONCLUSIONS AND RECOMMENDATIONS

The data secured in this study show that the children who read without pictures understood what they read as well as did the children who read the same material with the use of pictures. This statement is made within the limits of the small sampling of pupils and the character of the tests used. Such a conclusion supports some of the arguments against the use of pictures presented previously.

It should be remembered that no attempt was made to measure the influence of pictures on such matters as interest, enjoyment, or appreciation in the artistic sense. All that can be said is that the absence of pictures did not cause the children to read the material with less comprehension.

This study indicates that the use of illustrations may not be necessary in order to teach children to comprehend the material in the basal reader.

The study has certain limitations. All the children lived in one locality. The teachers who participated used the same method of teaching. Only one series of textbooks was used in the experiment. Some of the tests were probably too easy, as evidenced by the fact that some of the pretest scores were very high.

No argument is made for depriving children of pictures. Illustrations in books are a source of interest and pleasure to children. Possibly a distinction could be made between picture-books and books used to teach children to read.

SELECTION OF PREPRIMERS AND PRIMERS—A VOCABULARY ANALYSIS. I

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INTRODUCTION

The necessity for a controlled, systematically developed vocabulary in beginning reading materials arises separately from each of several commonly accepted principles in the teaching of beginning reading. One principle is that the child should experience reading from the beginning as the process of getting ideas from the printed page. If this objective is to be realized when the child is doing the reading, the materials must be composed mainly of vocabulary that is so familiar as to be instantly recognized. A second principle is that familiarity with printed words is best developed through meeting the words repeatedly in the reading of meaningful content. The fulfilment of this idea requires that reading materials repeat old words systematically and introduce new words gradually. A third principle is that accurate, fluent, and rapid reading at mature levels represents a complex of habits perfected through extensive practice in reading with accuracy, fluency, and rapidity at each subordinate level. One requisite for such reading is a vocabulary that is familiar to the reader.

Application of these principles necessitates a scientific selection of beginning reading materials. From the multiplicity of available preprimers and primers, which should be chosen? Economy in learning calls for the selection of those preprimers with vocabularies, high percentages of which are used in the first primer to be read. It is assumed here that extension of vocabulary at the preprimer level is uneconomical if it does not prepare for the reading of specific materials at the next higher level. This point of view is taken because more challenging content is obtainable at the higher levels.

An easy transition from preprimer to primer level would necessitate the reading of enough preprimers to develop sight recognition of a fair proportion of the vocabulary of the first primer. The slower the learner, the higher the percentage of sight words should be. The number of preprimers needed to develop sight recognition of a high percentage of the vocabulary of a primer depends on the percentage of the vocabulary of the primer that is contained in each preprimer and on the extent of identity between the vocabularies of the various preprimers.

The amount of identity to be desired varies with the aptitude of the pupils. The greater the identity between the vocabularies, the easier is the transition from preprimer to preprimer. The slow learner needs a high degree of overlapping in the vocabularies of succeeding books in order that there may be sufficient repetition for mastery and that the confusion and discouragement occasioned by the rapid introduction of new words may be avoided. On the other hand, the quick learner acquires new words at a more rapid rate and may profit from the reading of preprimers with more diverse vocabularies. Hence the bright pupil makes a successful approach to the primer through the reading of fewer preprimers than does his less gifted companion.

The teacher cannot make a wise selection for either pupil without a knowledge of the extent of identity in the vocabularies of the different beginning books. The same argument may be applied at succeeding levels. The concept here envisioned is a steady forward progress for each pupil which would eliminate the need for later remedial work.

Following is a report of an analysis of the vocabularies of twenty-six preprimers and seventeen primers for the purpose of determining (1) the preprimers which would prepare best for the reading of each of the primers analyzed, (2) the primers for which most adequate preparatory materials are available in the form of preprimers, (3) the best sequence for the reading of preprimers by children of different abilities, and (4) the best sequence for the reading of primers by children of different abilities. The books analyzed in this study are given at the end of this article.

PROCEDURE

The first step in the procedure was a page-by-page tabulation of the occurrence of words in each book. For this tabulation all variants of words were counted separately, including contractions, different tenses of verbs, possessives, hyphenated words, and words formed by the addition of final *s*, *ed*, *ing*, and *er*. Words occurring in captions, titles of stories, directions for study, and tests were tabulated.

The next procedure was the counting of (1) the number of words which each preprimer has in common with each primer, (2) the number of words which each preprimer has in common with each other preprimer, and (3) the number of words which each primer has in common with each other primer.[1] Frequencies of less than four were not included in these counts. This figure was fixed with no implication that four is a correct minimum of presentations. Merely, it was believed that the inclusion of smaller frequencies would confuse by giving a false appearance of identity among the vocabularies.

From the number of words in common thus obtained, the following percentages were computed: (1) the percentage of the vocabulary of each preprimer that is contained in each primer, (2) the percentage of the vocabulary of each primer that is contained in each preprimer, (3) the percentage of the vocabulary of each preprimer that is contained in each other preprimer, and (4) the percentage of the vocabulary of each primer that is contained in each other primer. These percentages were obtained in each case by dividing the number of words in common between two books by the total number of different words in one of them.

ANALYSIS AND INTERPRETATION OF DATA

The total number of different words in each book and the number of words with fewer than four presentations are shown in Table 1. Five presentations is the minimum found in *Jack and Sue* and in *We Play*. *Nippy* has a minimum of ten presentations per word. It is

[1] These data for fourteen primers were obtained from: Katie Belle Motley, "An Analysis of the Vocabularies of Primers." Unpublished Master's thesis, Western Kentucky State Teachers College, 1936.

TABLE 1

NUMBER OF DIFFERENT WORDS AND NUMBER OF WORDS PRESENTED FEWER THAN FOUR TIMES IN TWENTY-SIX PREPRIMERS AND SEVENTEEN PRIMERS

Book	Number of Different Words	Number of Words Presented Fewer than Four Times
Preprimers:		
1. Bob and Baby Pony	50	2
2. Boys and Girls at School	115	57
3. Elson Basic Pre-primer	69	8
4. Everyday Doings	54	34
5. Friends at Play	60	0
6. Frolic and Do-Funny	97	13
7. Here and There	78	10
8. Jack and Sue	50	0
9. Let Us Read	65	18
10. Let's Play	70	0
11. Little Friends	61	0
12. More Dick and Jane Stories	88	6
13. My First Book	67	14
14. Nip and Tuck	54	13
15. Nippy	53	0
16. Playing with Pets	94	12
17. Playmates	67	3
18. Rides and Slides	67	9
19. Sally and Billy	127	102
20. Saturday at the Park	249	160
21. Spot	64	5
22. The Little Book	115	80
23. The Picnic Book	111	18
24. Tom and Jip	36	1
25. Tom's Trip	71	0
26. Tots and Toys	102	27
Primers:		
1. At Home and Away	270	25
2. At the Farm	257	32
3. Ben and Alice	206	0
4. Bob and Judy	250	10
5. Day In and Day Out	254	31
6. Elson Basic Primer	244	25
7. Everyday Fun	284	46
8. Friends	410	0
9. Friends for Every Day	214	41
10. Jo-Boy	200	2
11. Little Friends at School	244	41
12. Peter and Peggy	322	133
13. Pets and Play Times	314	80
14. Play Days	298	0
15. Tom, Jip, and Jane	261	53
16. Wag and Puff	429	184
17. We Play	219	0

to be noted that both preprimers and primers vary greatly in the number of different words contained and in the number of words with fewer than four presentations.

Evaluation of preprimers as preparation for the reading of primers.—As stated above, the preprimers with vocabularies, high percentages of which appear in the first primer, prepare most economically for the reading of that primer. The percentages of preprimer vocabulary contained in the various primers are presented in Table 2.

Comparing the numbers in each column of Table 2 gives the ranks of the various preprimers with respect to their value in preparing for the reading of a given primer. For example, *Tom's Trip* ranks highest as preparation for *At Home and Away*, since 94 per cent of its vocabulary is in *At Home and Away*. *Sally and Billy* ranks lowest since only 17 per cent of its vocabulary is in this primer.

The proportion of the vocabulary of a primer that is contained in a particular preprimer indicates the extent to which the preprimer prepares for the reading of the primer and is one factor determining the number of preprimers to be read. Table 3 gives the percentage of the vocabulary of each primer that is contained in each preprimer. This table reads: 10 per cent of the vocabulary of *At Home and Away* is in *Bob and Baby Pony*, 12 per cent of the vocabulary of *At Home and Away* is in *Boys and Girls at School*, and so on. The variation in the percentages of the vocabularies of primers found in the different preprimers is from 3 to 32. Consequently, the number of preprimers that should be read would depend on *which* preprimers are read in preparation for *which* primers.

A selection of ten best preprimers to precede each primer.—To precede a given primer, those preprimers having the highest percentages of their vocabularies in common with the primer would naturally be chosen first. Then, the number of preprimers which should be read and the order in which they should be read would depend on the amount that each contributes to the vocabulary of the primer, the degree of identity between their vocabularies, and the aptitude of the child.

For each primer a selection was made of the ten preprimers with vocabularies the highest percentages of which appear in the primer. These percentages, belonging to seventeen preprimers, are shown in

TABLE 2

PERCENTAGE OF THE VOCABULARY OF EACH PREPRIMER APPEARING IN EACH PRIMER

Preprimer	At Home and Away	At the Farm	Ben and Alice	Bob and Judy	Day In and Day Out	Elson Basic Primer	Everyday Fun	Friends	Friends for Every Day	Jo-Boy	Little Friends at School	Peter and Peggy	Pets and Play Times	Play Days	Tom, Jip, and Jane	Wag and Puff	We Play
* 1. Bob and Baby Pony	52	**86†**	58	**66**	64	68	50	68	52	62	54	50	62	60	66	60	62
2. Boys and Girls at School	28	30	32	37	30	36	30	30	26	32	34	32	35	36	31	32	34
* 3. Elson Basic Pre-primer	59	**68**	64	**70**	71	**83**	64	72	54	**72**	65	54	**72**	**75**	**68**	**67**	**72**
4. Everyday Doings	24	19	26	30	26	28	30	28	20	26	24	17	22	24	26	24	19
* 5. Friends at Play	77	**68**	**100**	**80**	**82**	**87**	**80**	**88**	**70**	**77**	**73**	**77**	**85**	**85**	**77**	**82**	**80**
* 6. Frolic and Do-Funny	53	57	**67**	58	59	63	56	**77**	44	**61**	56	56	63	69	58	63	66
* 7. Here and There	**64**	**68**	**74**	64	**83**	**72**	**71**	**69**	**55**	**73**	**72**	**65**	**73**	**72**	**71**	**73**	**69**
* 8. Jack and Sue	**72**	**80**	**88**	**76**	**72**	**86**	**72**	**82**	**66**	**82**	**84**	**78**	**86**	**88**	**78**	**92**	**94**
9. Let Us Read	45	52	48	48	52	51	45	52	42	54	51	46	58	58	49	51	55
*10. Let's Play	74	**70**	**80**	**76**	**73**	**81**	**73**	**76**	**67**	**69**	**70**	**71**	**81**	**97**	**74**	**77**	**76**
*11. Little Friends	61	**70**	**69**	**74**	**67**	**72**	**72**	**69**	**66**	**70**	**85**	**66**	**70**	**74**	**72**	**72**	**74**
*12. More Dick and Jane Stories	58	**68**	63	**69**	**72**	**85**	**66**	**69**	**54**	**72**	**66**	52	69	**74**	67	**68**	**69**
13. My First Book	47	49	47	50	50	55	45	47	43	49	50	46	55	63	58	58	54
14. Nip and Tuck	43	44	43	65	50	44	43	46	41	44	39	44	48	46	56	44	46
*15. Nippy	**64**	66	**70**	**77**	64	**72**	60	**74**	**62**	**64**	**64**	**70**	**77**	**74**	**68**	**70**	66
*16. Playing with Pets	56	56	**65**	60	59	64	59	**79**	46	61	56	55	65	**70**	60	65	65
*17. Playmates	54	49	64	60	64	69	55	57	**69**	64	52	52	66	64	64	58	58
*18. Rides and Slides	**66**	**70**	**70**	**66**	**84**	**72**	**67**	**69**	**57**	**75**	**69**	**64**	**70**	**73**	**72**	**69**	**70**
19. Sally and Billy	17	17	17	17	17	19	17	17	9	18	14	16	17	18	17	20	17
20. Saturday at the Park	25	24	24	24	24	25	24	25	15	21	22	20	24	27	25	27	24
*21. Spot	69	59	61	61	**72**	**73**	**64**	**69**	44	**84**	59	**58**	**70**	**72**	**70**	**67**	**70**
22. The Little Book	22	24	25	25	24	26	23	22	20	25	25	25	22	23	24	30	24
*23. The Picnic Book	54	50	59	53	48	53	48	57	40	53	50	**59**	59	58	53	56	58
*24. Tom and Jip	**67**	**72**	**69**	**75**	**72**	**81**	**69**	**72**	**67**	**72**	**64**	**69**	**72**	**75**	**97**	**81**	**69**
*25. Tom's Trip	**94**	58	55	65	56	61	61	59	38	52	61	55	52	56	58	61	55
26. Tots and Toys	40	40	48	38	54	46	42	48	32	47	42	40	47	44	43	45	42

* Asterisks mark the seventeen preprimers selected for special study.

† Boldface figures are shown in each column for the preprimers ranking in the first ten in percentage of their vocabularies which appear in the given primer.

TABLE 3

PERCENTAGE OF THE VOCABULARY OF EACH PRIMER APPEARING IN EACH PREPRIMER*

Preprimer	At Home and Away	At the Farm	Ben and Alice	Bob and Judy	Day In and Day Out	Elson Basic Primer	Everyday Fun	Friends	Friends for Every Day	Jo-Boy	Little Friends at School	Peter and Peggy	Pets and Play Times	Play Days	Tom, Jip, and Jane	Wag and Puff	We Play
1. Bob and Baby Pony	10	**17**	14	**13**	13	14	9	8	12	16	11	8	10	10	13	7	14
2. Boys and Girls at School	12	13	18	17	13	17	12	8	14	19	16	11	13	14	14	9	18
3. Elson Basic Pre-primer	15	**18**	21	**19**	**19**	**23**	**15**	**12**	**17**	**25**	**18**	11	**16**	**17**	**18**	11	**23**
4. Everyday Doings	5	4	7	6	6	6	6	4	5	7	5	3	4	4	5	3	5
5. Friends at Play	17	**16**	**29**	**19**	**19**	**21**	**17**	**13**	**20**	**23**	18	14	**16**	**17**	**18**	**11**	**22**
6. Frolic and Do-Funny	19	21	**31**	**22**	**22**	25	19	**18**	20	30	22	17	19	22	21	14	29
7. Here and There	**19**	**21**	**28**	20	**26**	**23**	**19**	**13**	20	29	23	**16**	**18**	**19**	**21**	**13**	**25**
8. Jack and Sue	13	16	**21**	**15**	**14**	**18**	**13**	10	15	21	17	12	14	15	15	11	21
9. Let Us Read	11	13	15	12	13	14	10	8	13	18	14	9	12	13	12	8	16
10. Let's Play	**19**	**19**	**27**	**21**	**20**	**23**	**18**	**13**	**22**	**24**	**20**	**16**	**18**	**23**	**20**	**13**	**24**
11. Little Friends	14	**17**	20	18	16	18	15	10	**19**	**22**	**21**	12	14	15	17	10	21
12. More Dick and Jane Stories	19	23	27	**24**	**25**	**31**	**20**	**15**	**22**	**32**	**24**	14	19	**22**	23	14	**28**
13. My First Book	13	14	17	15	15	17	12	9	15	19	16	11	13	16	17	10	19
14. Nip and Tuck	9	9	11	14	11	10	8	6	10	12	9	7	8	8	11	6	11
15. Nippy	**13**	14	**18**	**16**	13	16	11	10	15	17	**14**	**11**	13	13	**14**	**9**	16
16. Playing with Pets	20	21	**30**	22	22	25	19	18	20	29	22	16	19	22	21	14	28
17. Playmates	13	13	21	16	17	19	13	9	**21**	22	14	11	14	14	16	9	18
18. Rides and Slides	**16**	**18**	**23**	**18**	**22**	**20**	**16**	**11**	**18**	**25**	**19**	**13**	**15**	**16**	**18**	**11**	**21**
19. Sally and Billy	8	9	11	8	9	10	8	5	6	12	7	6	7	8	8	6	10
20. Saturday at the Park	23	23	29	24	23	26	21	15	18	27	23	16	19	22	24	16	27
21. Spot	**16**	15	19	16	**18**	**19**	**14**	**11**	13	**27**	16	11	**14**	**15**	**17**	**10**	**21**
22. The Little Book	9	11	14	12	11	12	10	6	11	15	12	9	8	9	11	8	13
23. The Picnic Book	22	22	32	24	21	24	19	15	21	30	23	20	21	21	23	14	29
24. Tom and Jip	**9**	**10**	**12**	**11**	**10**	**12**	**9**	6	11	13	**9**	**8**	**8**	**9**	**13**	**7**	**11**
25. Tom's Trip	**25**	16	19	18	16	18	15	10	13	19	18	12	12	13	16	10	18
26. Tots and Toys	15	16	24	16	22	19	15	12	15	24	18	13	15	15	17	11	20

* Boldface figures are shown in each column for the seventeen preprimers selected for special study, which are those shown in Table 2 to rank in the first ten in percentage of their vocabularies appearing in the primers.

Table 2 in boldface type. More than ten percentages are indicated in bold type for a primer in cases where more than one preprimer has the tenth position and where more than ten percentages are higher than 70. Except in three instances, only fourteen of the twenty-six preprimers furnish the ten highest percentages for all primers.

TABLE 4

SUMMARY OF DATA ON RELATION OF VOCABULARIES IN TWENTY-SIX PREPRIMERS TO VOCABULARIES IN SEVENTEEN PRIMERS

Primer	Number of Preprimers Having 70 Per Cent or More of Their Vocabularies in the Primer	Number of Preprimers* Containing 20 Per Cent or More of the Vocabulary of the Primer	Number of Preprimers* Containing 15 Per Cent or More of the Vocabulary of the Primer
Play Days	12	3	10
Elson Basic Primer	11	6	10
Pets and Play Times	10	0	5
Jo-Boy	9	9	9
Day In and Day Out	9	4	7
Tom, Jip, and Jane	8	2	7
Friends	8	0	2
We Play	7	7	7
Bob and Judy	7	1	6
Wag and Puff	7	0	0
Ben and Alice	6	5	6
At the Farm	6	0	6
Little Friends at School	5	3	5
Everyday Fun	5	0	4
At Home and Away	4	1	3
Peter and Peggy	4	0	1
Friends for Every Day	1	1	1

* The preprimers included in these columns are limited to those included in the first column of data.

Preprimers having percentages among the ten highest for all seventeen primers are *Friends at Play*, *Jack and Sue*, *Let's Play*, *Little Friends*, *Rides and Slides*, and *Tom and Jip*.

The percentages for the ten preprimers selected in Table 2 as best for each primer are again shown in boldface type in Table 3. The percentages of the vocabulary of each primer contained in these preprimers vary from 6 per cent to 32 per cent.

Selection of a first primer.—One criterion for the selection of a first primer is the ease with which preparation for it can be achieved

through the reading of preprimers. The percentages in boldface type in Tables 2 and 3 indicate that preparation for the reading of the various primers is not accomplished with equal economy of effort nor by the reading of an equal number of preprimers. Preparation for the reading of certain primers seems easy of achievement because (1) high percentages of the vocabularies of many preprimers appear in the primer and (2) these preprimers contain relatively high percentages of the vocabulary of the primer.

Table 4 summarizes these facts for seventeen primers. The facts of this table indicate that preprimers are available to prepare adequately and economically for the reading of certain primers, namely, *Play Days*, *Elson Basic Primer*, *Jo-Boy*, *We Play*, and *Day In and Day Out*. Preparatory preprimers are somewhat less adequate for *Ben and Alice* and for *Tom, Jip, and Jane*. Because of the smaller proportions of their vocabularies in the preprimers, preparation for *Pets and Play Times* and for *Friends* would require the reading of more preprimers than would preparation for the group of primers mentioned above. Preparatory preprimers are seen to be least adequate for the primers at the bottom of Table 4, including *At Home and Away*, *Peter and Peggy*, and *Friends for Every Day*.

SUMMARY

In the present article selection has been made of (1) the preprimers which best prepare for the reading of each of seventeen primers and (2) the primers for which most adequate preparatory materials are available in the form of preprimers. A subsequent article will discuss an appropriate sequence for the reading of the various preprimers and primers by children of different abilities.

Books Included in the Vocabulary Analysis

PREPRIMERS

1. Cora M. Martin, *Bob and Baby Pony*. Real Life Readers. New York: Charles Scribner's Sons, 1931.
2. Margaret L. White and Alice Hanthorn, *Boys and Girls at School*. Do and Learn Readers. Chicago: American Book Co., 1930.
3. William H. Elson and William S. Gray, *The Elson Basic Readers*, Preprimer. Chicago: Scott, Foresman & Co., 1930.
4. Julia Letheld Hahn, *Everyday Doings*. Child Development Readers. Boston: Houghton Mifflin Co., 1935.

5. Ullin W. Leavell, Elizabeth G. Breckinridge, Mary Browning, and Hattie Follis, *Friends at Play*. The Friendly Hour. Chicago: American Book Co., 1935.
6. Mary E. Pennell and Alice M. Cusack, *Frolic and Do-Funny*. The Children's Own Readers. Boston: Ginn & Co., 1932.
7. Mabel O'Donnell and Alice Carey, *Here and There*. The Alice and Jerry Books. Evanston, Illinois: Row, Peterson & Co., 1936.
8. Amelia McLester, *Jack and Sue*. The Child Activity Readers. Morristown, Tennessee: Augsburg Publishing Co., 1936.
9. Alberta Walker and Ethel Summy, *Let Us Read*. New York: Charles E. Merrill Co., 1929.
10. B. R. Buckingham and Marguerite P. Dolch, *Let's Play*. The Children's Bookshelf. Boston: Ginn & Co., 1934.
11. Katherine E. Dopp, May Pitts, and S. C. Garrison, *Little Friends*. Happy Road to Reading. Chicago: Rand McNally & Co., 1934.
12. William H. Elson and William S. Gray, *More Dick and Jane Stories*. Chicago: Scott, Foresman & Co., 1934.
13. Bessie Blackstone Coleman, *My First Book*. New York: Silver, Burdett & Co., 1927.
14. Grace E. Storm, *Nip and Tuck*. Guidance in Reading Series. Chicago: Lyons & Carnahan, 1936.
15. Avis Coultas Stevens, *Nippy*. St. Louis, Missouri: Webster Publishing Co., 1936.
16. Mary E. Pennell, *Playing with Pets*. The Children's Own Readers, Companion Series. Boston: Ginn & Co., 1932.
17. Clara B. Baker, Mary Maud Reed, and Edna D. Baker, *Playmates*. The Curriculum Readers. Indianapolis, Indiana: Bobbs-Merrill Co., 1934.
18. Mabel O'Donnell and Alice Carey, *Rides and Slides*. The Alice and Jerry Books. Evanston, Illinois: Row, Peterson & Co., 1936.
19. Marjorie Hardy, *Sally and Billy*. The Child's Own Way Series. Chicago: Wheeler Publishing Co., 1928.
20. Jeanette Smith, *Saturday at the Park*. Bloomington, Illinois: McKnight & McKnight, 1935.
21. Mildred English and Thomas Alexander, *Spot*. Happy Hour Readers. Richmond, Virginia: Johnson Publishing Co., 1935.
22. Marjorie Hardy, *The Little Book*. The Child's Own Way Series. Chicago: Wheeler Publishing Co., 1928.
23. Jean Y. Ayer, *The Picnic Book*. New York: Macmillan Co., 1934.
24. Clarence R. Stone, Dodie Hooe, and Margaret Mosby, *Tom and Jip*. The Webster Readers. St. Louis, Missouri: Webster Publishing Co., 1935.
25. Nila Banton Smith, *Tom's Trip*. The Unit-Activity Reading Series. New York: Silver, Burdett & Co., 1935.
26. William Dodge Lewis and Ethel Maltby Gehres, *Tots and Toys*. The New Silent Readers. Philadelphia: John C. Winston Co., 1931.

PRIMERS

1. Nila Banton Smith, *At Home and Away*. The Unit-Activity Reading Series. New York: Silver, Burdett & Co., 1935.
2. Cora M. Martin, *At the Farm*. Real Life Readers. New York: Charles Scribner's Sons, 1930.
3. Ullin W. Leavell, Elizabeth G. Breckinridge, Mary Browning, and Hattie Follis, *Ben and Alice*. The Friendly Hour. Chicago: American Book Co., 1935.
4. Grace E. Storm, *Bob and Judy*. Guidance in Reading Series. Chicago: Lyons & Carnahan, 1936.
5. Mabel O'Donnell and Alice Carey, *Day In and Day Out*. The Alice and Jerry Books. Evanston, Illinois: Row, Peterson & Co., 1936.
6. William H. Elson, Lura E. Runkel, and William S. Gray, *The Elson Basic Readers*, Primer. Chicago: Scott, Foresman & Co., 1930.
7. Julia Letheld Hahn, *Everyday Fun*. Child Development Readers. Boston: Houghton Mifflin Co., 1935.
8. Mary E. Pennell and Alice M. Cusack, *Friends*. The Children's Own Readers. Boston: Ginn & Co., 1936 (new edition).
9. Clara B. Baker, Mary Maud Reed, and Edna Dean Baker, *Friends for Every Day*. The Curriculum Readers. Indianapolis, Indiana: Bobbs-Merrill Co., 1934.
10. Mildred English and Thomas Alexander, *Jo-Boy*. Happy Hour Readers. Richmond, Virginia: Johnson Publishing Co., 1935.
11. Katherine E. Dopp, May Pitts, and S. C. Garrison, *Little Friends at School*. Happy Road to Reading. Chicago: Rand McNally & Co., 1935.
12. Arthur I. Gates and Miriam Blanton Huber, *Peter and Peggy*. The Work-Play Books. New York: Macmillan Co., 1930.
13. William E. Grady, Paul Klapper, and Jane C. Gifford, *Pets and Play Times*. Childhood Readers. New York: Charles Scribner's Sons, 1932.
14. B. R. Buckingham and Bertha H. Buckingham, *Play Days*. The Children's Bookshelf. Boston: Ginn & Co., 1934.
15. Clarence R. Stone and Anne Lotter Stone, assisted by Ida Vandergaw, *Tom, Jip, and Jane*. The Webster Readers. St. Louis, Missouri: Webster Publishing Co., 1932.
16. Marjorie Hardy, *Wag and Puff*. The Child's Own Way Series. Chicago: Wheeler Publishing Co., 1926.
17. Amelia McLester, *We Play*. The Child Activity Readers. Morristown, Tennessee: Augsburg Publishing Co., 1936.

[*To be concluded*]

SELECTED REFERENCES FROM THE LITERATURE ON EXCEPTIONAL CHILDREN

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The references in the following bibliography from the literature on exceptional children are classified as follows: publications concerned with (1) subnormal and backward children, (2) behavior and problem cases, (3) juvenile delinquency, (4) superior and gifted children, (5) blind and partially seeing children, (6) crippled children, (7) deaf and hard-of-hearing children, (8) delicate children, (9) speech defectives, and (10) general references. The references in the first four of these classifications were compiled and annotated by Dr. Hildreth; those in the fifth to the ninth classifications, inclusive, by Dr. Martens. Each of the two compilers supplied general references.

SUBNORMAL AND BACKWARD CHILDREN[1]

200. BERRY, CHARLES SCOTT. "Public School Education of Mentally Retarded Children," *Proceedings and Addresses of the Sixtieth Annual Session of the American Association on Mental Deficiency*, XLI (1936), 111–30.

A description of educational objectives and provisions for mentally retarded children in the public schools.

201. BOND, ELDEN A. "A Method of Selecting Subnormal Children for a Vocational School," *Journal of Juvenile Research*, XXI (July, 1937), 188–92.

Reports methods used in a city school population for segregating subnormal children retarded in school work.

202. DOLL, EDGAR A., and MCKAY, B. ELIZABETH. "The Social Competence of Special Class Children," *Journal of Educational Research*, XXXI (October, 1937), 90–106.

[1] See also Items 390 (Feldman), 421 (Pertsch), and 422 (Postel) in the list of selected references appearing in the September, 1937, number of the *Elementary School Journal* and Items 356 (Burt), 358 (Hill), and 359 (Pritchard) in the May, 1938, *School Review*.

The Vineland Social Maturity Scale was used to supplement standard-test data in distinguishing between dull-normal and feeble-minded children in special classes for the mentally retarded.

203. FLORY, CHARLES D. *Physical Growth of Mentally Deficient Boys.* Society for Research in Child Development Monographs, Vol. I, No. 6. Washington: National Research Council, 1936. Pp. x+120.

A study undertaken to determine the characteristics of the physical growth of mentally deficient boys. Detailed findings are presented for anthropometric measurements, X-ray photographs, medical diagnoses, and case histories of eight hundred subjects in state institutions.

204. GATES, ARTHUR I. "The Reading Program for Dull-normal Pupils," *The Role of Research in Educational Progress*, pp. 224–28. Official Report of the American Educational Research Association, 1937. Washington: American Educational Research Association of the National Education Association, 1937.

A preliminary report of reading programs for dull children being carried on in an experimental public school in New York City.

205. GLANVILLE, A. D. "Psychometric Patterns in Industrial School Boys," *Delaware State Medical Journal*, IX (April, 1937), 91–94.

An analysis of scores made by industrial-school boys on verbal and performance tests showed language retardation to be an important cause of delinquency.

206. ISRAELITE, JUDITH. "A Comparison of the Difficulty of Items for Intellectually Normal Children and Mental Defectives on the Goodenough Drawing Test," *American Journal of Orthopsychiatry*, VI (October, 1936), 494–503.

Results of the Goodenough drawing-a-man test were analyzed for mental defectives and normal children. Drawings of the two groups were distinctive in certain fundamental characteristics.

207. KEATOR, MAUD. "Industrial Supervision of Mentally Inferior Youths," *Proceedings and Addresses of the Sixtieth Annual Session of the American Association on Mental Deficiency*, XLI (1936), 89–95.

Mentally inferior boys and girls who have difficulty finding jobs after leaving special classes in Hartford, Connecticut, are supervised by a city commission with the co-operation of welfare agencies. Data summarizing this service are included in the report.

208. "Library Books Best Liked by Retarded Children," *Reading and the School Library*, III (January, 1937), 100.

A list of 114 books liked best by pupils with intelligence quotients between 49 and 81 and with ages between 10 and 17.

209. LURIE, L. A. "Conduct Disorders of Intellectually Subnormal Children: A Study of Correlations of Intelligence Levels of 80 to 89, to Behavior

Disorders of Children," *American Journal of Psychiatry*, XCIII (March, 1937), 1025–38.

An analysis of the causes of referral of 255 mentally subnormal children sent to a child-guidance home.

210. MARTENS, ELISE H. (Compiler and Editor). *A Guide to Curriculum Adjustment for Mentally Retarded Children.* United States Office of Education Bulletin No. 11, 1936. Pp. 134.

A manual compiled by thirteen specialists describes recommended educational provisions for mentally retarded children.

211. ROSS, MARJORIE F. "The Dull or Retarded Child," *School*, XXV (June, 1937), 875–79.

The author lists six objectives in training the dull and retarded child and emphasizes the importance of identifying the dull child, training teachers to deal with him intelligently, and arranging the program with his needs in mind.

212. SALTSMAN, EDWARD A. "A Study of the Failing Child," *Ohio Schools*, XV (April, 1937), 156.

The extent and the causes of failure are discussed, and recommendations are made for reducing school failure.

213. VAUGHN, CHARLES L., and HOOSE, ELIZABETH S. "Special Abilities in a Mentally Deficient Boy," *Proceedings and Addresses of the Sixtieth Annual Session of the American Association on Mental Deficiency*, XLI (1936), 197–207.

A report of guidance given to a negro boy fourteen years of age who was mentally defective but highly gifted in drawing and painting.

214. WARD, LEWIS B. "Motor Conflicts and Transfer of Training in High Grade Mental Defectives," *Proceedings and Addresses of the Sixtieth Annual Session of the American Association on Mental Deficiency*, XLI (1936), 50–59.

Twenty-four mentally defective subjects, divided into three groups on the basis of handedness, were investigated for bilateral transfer of training in maze learning. The bearing of the results on mirror writing is pointed out.

215. WOODY, CLIFFORD. "An Analysis of Differences in the Learning of Bright and Dull Children," *University of Michigan School of Education Bulletin*, VIII (December, 1936), 37–39.

The differences in learning of dull and bright children are differences of degree rather than of kind. The dull child learns more slowly and needs more repetition in shorter lesson units.

BEHAVIOR AND PROBLEM CASES

216. BENDER, LAURETTA. *Behavior Problems in the Children of Psychotic and Criminal Parents.* Genetic Psychology Monographs, Vol. XIX, No. 2. Provincetown, Massachusetts: Journal Press, 1937.

Describes behavior problems necessitating observation in a psychiatric clinic which were exhibited by children who had psychotic or criminal parents. Etiological factors are analyzed.

217. BODIN, NATHAN. "Do Problem Children Become Delinquents and Criminals?" *Journal of Criminal Law and Criminology*, XXVII (November–December, 1936), 545–50.

More than 50 per cent of the closed cases in the records of a guidance bureau in a public-school system were found on maturity to have become delinquent or criminal. Mental retardation was found in 27.9 per cent of the cases.

218. BRILL, MOSHE. "Performance Tests as Aids in the Diagnosis of Maladjustment," *Pedagogical Seminary and Journal of Genetic Psychology*, XLIX (September, 1936), 190–214.

Performance tests and scales are recommended for studying maladjusted behavior in mentally deficient boys.

219. FENTON, NORMAN, and WALLACE, RAMONA. "Child Guidance in California Counties: Part 4, A Statistical Study of 1,660 Cases Referred to the California Bureau of Juvenile Research," *Journal of Juvenile Research*, XXI (July, 1937), 125–80.

A summary of the clinical pictures and problems presented by cases referred to the California Bureau of Juvenile Research. Analyzes data from 795 case histories of children examined by this traveling child-guidance clinic.

220. KROSSER, DORA B. "Six Years of Teaching 'Incorrigibles,'" *Training School Bulletin*, XXXIV (March, 1937), 1–7.

Incorrigible boys were found to be low in intelligence, to be slow learners, to have chronic dislike for school, and to have difficulty with particular subjects. A brief description of teaching methods for incorrigibles is given.

221. NIFENECKER, EUGENE A. Review of Departmental Experience in Dealing with Problems of School Maladjustment: Part II, *Statistical Reference Data Relating to Problems of Overageness, Educational Retardation, Nonpromotion, 1900–1934*. Prepared for Joint Committee on Problems of School Maladjustment. Publication No. 28. New York: Bureau of Reference, Research, and Statistics, Board of Education of the City of New York, 1937. Pp. 288.

An important report of statistical data.

222. SMITH, BYRD ARNOLD. "The Education and Supervision of Mental Defectives," *Journal of Criminal Law and Criminology*, XXVIII (July–August, 1937), 210–19.

Cases are cited illustrating problem behavior in dull and mentally defective children.

223. TUCKER, LOUISE EMERY. *A Study of Problem Pupils*. Teachers College Contributions to Education, No. 720. New York: Teachers College, Columbia University, 1937. Pp. viii+172.

An inquiry into factors in child, parent, teacher, home, and school associated with behavior of children described by teachers as "troublemakers" in a negro population.

JUVENILE DELINQUENCY

224. DUREA, MERVIN A. "The Emotional Maturity of Juvenile Delinquents," *Journal of Abnormal and Social Psychology*, XXXI (January–March, 1937), 472–81.

Juvenile delinquents are emotionally retarded as compared, age for age, with non-delinquents measured on interest-attitude tests. Maturation of emotional behavior is as significant as other variables in an understanding of delinquent personality.

225. DUREA, MERVIN A. "Personality Characteristics of Juvenile Delinquents," *Child Development*, VIII (June and October, 1937), 115–28, 257–62.

Items on interest-attitude tests were analyzed for their capacity to differentiate delinquents and non-delinquents in several populations. A morbid strain was found to characterize delinquents, and their reactions to people suggest egocentric personality traits.

226. DUREA, MERVIN, and PATAKY, JOSEPH. "A Clinical Method for Diagnosing the Seriousness of Juvenile Delinquency," *Journal of Criminal Law and Criminology*, XXVIII (July–August, 1937), 232–38.

A revised method of computing the "delinquency index" is recommended, based on duration of delinquency, frequency of appearance in juvenile courts, and scale values for delinquency acts.

227. GLUECK, ELEANOR T. "Culture Conflict and Delinquency," *Mental Hygiene*, XXI (January, 1937), 46–66.

From a comparison made between groups of native-born delinquents, one with native-born and the other with foreign-born parents, the conclusion is drawn that the causal factors are to be found in intangible aspects of culture conflict rather than in external environmental influences.

228. GOSSMAN, ROY J. "Adjustment of Juvenile Delinquent Boys," *Journal of Exceptional Children*, III (June, 1937), 148–50.

Methods used in handling delinquent boys at the Chicago Juvenile Detention Home are described, and the chief causes of delinquency are discussed.

229. HIRSCH, NATHANIEL DAVID MTTRON. *Dynamic Causes of Juvenile Crime.* Cambridge, Massachusetts: Sci-Art Publishers, 1937. Pp. 250.

The report of a study made at the Wayne County (Michigan) Clinic for Juvenile Delinquency. Causal factors were investigated in 604 cases. A review of experimental studies is included.

230. JACOB, WALTER. "Juvenile Delinquency—Plainfield Works at It," *Journal of the National Education Association*, XXVI (December, 1937), 288–90.

An account of the work being done by the Plainfield (New Jersey) Delinquency Council in dealing with juvenile delinquency.

231. *Juvenile Court Statistics, Year Ended December 31, 1934, and Federal Juvenile Offenders, Year Ended June 30, 1935.* United States Children's Bureau Publication No. 235, 1937. Pp. iv+106.

Trends in delinquency rates are indicated in this report.

232. KEPHART, NEWELL C. "Some Changes in Delinquents during Institutional Commitment," *Journal of Juvenile Research*, XXI (April, 1937), 67–75.

Through association tests and sociometric measurements, delinquent boys were tested on entrance to the institution and again after a period of six months. Statistically reliable changes were found, which are summarized in the report.

233. KIRKPATRICK, MILTON E. "Some Significant Factors in Juvenile Recidivism," *American Journal of Orthopsychiatry*, VII (July, 1937), 349–59.

The following factors are found relevant to the problem of recidivism in juvenile offenders: age, race, school grade, school problems, number of children in the family, neighborhood, type of offense, and number of agencies in contact with the family. The report urges greater sensitivity to these social danger zones on the part of workers in the field of juvenile delinquency.

234. McHUGH, ROSE J. (Editor). *The Delinquent Child and the Institution.* State of New York Department of Social Welfare, No. 3. Albany, New York: State of New York Department of Social Welfare, 1937.

A series of eight articles and a bibliography prepared by leading experts in this field, relating especially to administrative, psychiatric, and social services in connection with institutions for juvenile delinquents.

235. MALLER, J. B. "Juvenile Delinquency in New York City: A Summary of a Comprehensive Report," *Journal of Psychology*, III (January, 1937), 1–25.

The records of the Children's Courts of New York City for three decades were analyzed to show delinquency trends. Geographically, delinquency was found to be concentrated in areas with poor economic, social, educational, and health conditions.

236. MOORE, JOSEPH E. "A Comparative Study of the Intelligence of Delinquent and Dependent Boys," *Journal of Educational Psychology*, XXVIII (May, 1937), 355–66.

Tests for delinquency are reviewed; underlying assumptions are stated; and methods of determining validity are listed. Includes a bibliography.

237. OSGOOD, W. B., and TRAPP, C. E. "A Study of 400 Juvenile Delinquents; Statistical Report," *New England Journal of Medicine*, No. 215 (October 1, 1936), 623–26.

Summarizes data for four hundred delinquent cases relating to age of offenders, mental ability, and type of offenses committed.

238. POWDERMAKER, F., LEVIS, H. TURNER, and TOURAINE, G. "Psychopathology and Treatment of Delinquent Girls," *American Journal of Orthopsychiatry*, VII (January, 1937), 58–71.

A report of the methods of treatment applied to eighty-one delinquent girls.

239. RECKLESS, WALTER C. "Juvenile Delinquency and Behavior Patterning," *Journal of Educational Sociology*, X (April, 1937), 493–505.

Factors associated with juvenile delinquency are analyzed. The importance of early home influences is considered. Reformatories and correctional schools tend to spread delinquency. Motion pictures are a contributing factor. It is recommended that treatment be directed toward repatterning behavior.

240. YOUNG, PAULINE VISLICK. *Social Treatment in Probation and Delinquency*. New York: McGraw-Hill Book Co., Inc., 1937. Pp. xxxvi+646.

A comprehensive report of methods used in dealing with delinquency.

SUPERIOR AND GIFTED CHILDREN[1]

241. COHEN, HELEN LOUISE. "The Program for Gifted Pupils in New York City," *English Journal* (High School Edition), XXVI (September, 1937), 548–56.

A survey of English curriculums and programs for gifted pupils used in New York City high schools.

242. HOLLINGWORTH, LETA S. " 'Bright Students Take Care of Themselves,' " *North American Review*, CCXLIII (Summer, 1937), 261–73.

The author contends that bright students cannot utilize their abilities to a maximum degree in childhood or adult life. Outstanding traits of the gifted are indicated, and a plea is made for more adequate provisions for children with intelligence quotients over 130.

243. HOLLINGWORTH, LETA S., and RUST, METTA MAUND. "Application of the Bernreuter Inventory of Personality to Highly Intelligent Adolescents," *Journal of Psychology*, IV (October, 1937), 287–93.

Adolescents, chiefly of Semitic stock, whose intelligence quotients in childhood were above 135, were found to be less neurotic, more self-sufficient, and less submissive than college students in general or the adults represented in the Bernreuter norms.

244. SELLINGER, BENJAMIN. "Challenge of the 1,500,000 with Exceptional Intelligence," *High Points in the Work of the High Schools of New York City*, XIX (June, 1937), 48–53.

The problem presented by gifted children in high school is discussed, and alternative provisions are suggested for giving maximum opportunity to those with exceptional intelligence.

[1] See also report by Eunice Strabel in Item 484 in the list of selected references appearing in the October, 1937, number of the *School Review*, Item 533 (Herr) in the November, 1937, number of the *School Review*, and Item 355 (Bentley) in the May, 1938, number of the *School Review*.

245. STREET, R. F. "The Mentally Superior Child," *Journal of Exceptional Children*, III (February, 1937), 83–86.

Superior children in the Battle Creek (Michigan) public schools were compared with average children in mental and social responses. The outstanding traits characteristic of gifted children are reported.

246. TAYLOR, HOWARD. "The Gifted Child and His Education," *Journal of Exceptional Children*, III (October, 1936), 10–14.

Characteristics of gifted children are described, and suggestions are made for educating such children in the public schools.

247. WINSOR, FREDERICK. "Educating the Gifted Boy," *Atlantic Monthly*, CLIX (May, 1937), 570–78.

A plea for more adequate educational training and more flexible curriculum provisions for the upper fifth of the school population in intelligence and scholastic ability.

248. WITTY, PAUL A. "The Nature and Needs of Gifted Children," *Educational Trends*, V (December, 1936), 11–13.

The failure of fifty superior children over a ten-year period to show conspicuous creative talent is attributed to the failure of schools to foster talent through a suitable milieu. Facts relating to gifted children are summarized, and an appeal is made for more sympathetic educational provisions for these children in the schools.

BLIND AND PARTIALLY SEEING CHILDREN

249. ATHEARN, CLARENCE R. "Keeping Pace with the Advancing Curriculum," *Teachers Forum for Instructors of Blind Children*, X (September, 1937), 2–6.

The director of educational research at the New York Institute for the Education of the Blind discusses the underlying principles of curriculum changes and describes how they have been applied in the teaching of the blind in relation to elementary-school work and to junior and senior high school work.

250. *Education of the Blind: A Survey*. London, England: Edward Arnold & Co., 1936. Pp. 344.

The survey was made in England by a committee appointed jointly by the College of Teachers of the Blind and the National Institute for the Blind. Considers the history of the work, objectives of the program, instructional problems for various age groups, administrative problems, individual differences in capacity, and the relative place of industrial and university training.

251. FARRELL, GABRIEL. "Vocational Guidance at Perkins," *Outlook for the Blind*, XXXI (June, 1937), 65–69.

Describes the methods of vocational guidance afforded at Perkins Institution and Massachusetts School for the Blind and the results of such guidance.

252. HALL, INIS B. "Practical Treatment of the Deaf-blind," *Journal of Exceptional Children*, III (April, 1937), 102–6, 126.

The author is in charge of the deaf-blind department of the Perkins Institution and Massachusetts School for the Blind. She describes the special characteristics and needs of this group of handicapped persons, together with their possibilities for educational development.

253. HATHAWAY, WINIFRED. "What Are the Educational Facilities for the Visually Handicapped?" *Sight-saving Review*, VII (June, 1937), 90–95.

Considers various aspects of sight-saving classes, such as bases of selection of pupils, purpose of such classes, qualifications of instructor, physical setup and materials, and methods of instruction.

254. SANKEY, ANNA MCCLAIN. "Problems in Teaching Speech to the Blind," *Quarterly Journal of Speech*, XXIV (February, 1938), 77–83.

Adjustment in the teacher's attitude, advantages of individual instruction, corrective speech techniques, and development of artistic speech are among the problems considered.

255. SPROWLES, M. REBA. "Development of Sight-saving Class Work in the Fairhill School, Philadelphia," *Sight-saving Review*, VII (December, 1937), 263–71.

Describes how the sight-saving class work is co-ordinated with that of the regular classes. For older pupils, from thirteen to twenty years of age, not mentally or physically equipped for high-school work, opportunities are provided for experiences in homemaking, salesmanship, gardening, and personal hygiene.

256. WILBER, LOUISE. *Vocations for the Visually Handicapped*. New York: American Foundation for the Blind, 1937. Pp. 224.

The author, herself a blind person, pleads for a vocational-guidance program for the blind, with particular reference to residential schools. Sketches the careers of successful blind persons of the twentieth century and holds that the blind compare favorably in performance with persons of normal vision. Outlines the elements of a vocational-guidance program as she thinks it should be developed.

CRIPPLED CHILDREN

257. CARROLL, ROBERT L. "Speech Training in the Child Crippled by Spastic Paralysis," *Journal of Speech Disorders*, II (September, 1937), 155–57.

A discussion of the relation of the muscles of speech to the muscles of the extremities. Concludes that speech training, coupled with measures to improve other muscular action and co-ordination, is most effective. Such training requires the co-operation of speech teacher, physical-education teacher, doctor, and orthodontist.

258. GIRARD, PERCY MERRITT. *Home Treatment of Spastic Paralysis*. Philadelphia: J. B. Lippincott Co., 1937. Pp. xxviii+130.

A physician discusses in nontechnical language the essential facts of spastic paralysis and makes numerous suggestions concerning physical therapy, speech

training, occupational therapy, and other problems to be faced by parents of the afflicted child.

259. JOHNSON, GRACE V. "New Busy Hands," *Crippled Child*, XV (December, 1937), 94–95.

Brief descriptions, by the occupational therapist of the schools, of the work being done at Dowling School (for crippled children) in Minneapolis, Minnesota.

260. LORD, ELIZABETH EVANS. *Children Handicapped by Cerebral Palsy*. New York: Commonwealth Fund, 1937. Pp. xiv+106.

A study of the psychological problems involved in the treatment and development of children afflicted with spastic paralysis. Written for professional workers.

261. MCINTIRE, HAZEL C. "Education for Crippled Children: An Adequate State Program," *Crippled Child*, XV (December, 1937), 96–100.

Discusses the important place of education in an adequate state program for crippled children, its relation to other phases of the program, and the vital factors which should characterize it.

262. PHENIX, FLORENCE L. "Wisconsin's Dual Program for the Crippled Child," *Public Health Nursing*, XXIX (November, 1937), 642–44.

Describes the methods used in Wisconsin in administering the provisions for both physical restoration and academic education of crippled children.

263. ROSENBAUM, BETTY B. "Neurotic Tendencies in Crippled Girls," *Journal of Abnormal and Social Psychology*, XXXI (January–March, 1937), 423–29.

The Thurstone Personality Schedule was given to a group of crippled girls assembled at a camp and was administered again after the girls had returned to their homes. Findings seem to indicate "that there is a real tie-up between the factors of degree of crippledness and neuroticism."

264. TELLER, IRENE E. "Education for the Physically Handicapped," *School and Society*, XLVI (November 20, 1937), 668–71.

A brief report of a follow-up study of fifty-one crippled children graduated from the high school for the crippled at Spalding School, Chicago. Statistics are presented concerning advanced study, employment, attitudes of teachers and employers, necessary adjustments, and suggested changes in the high-school course of study, as reported by the persons contacted.

DEAF AND HARD-OF-HEARING CHILDREN

265. ANDERSON, TOM L. "The Handwriting on the Wall," *American Annals of the Deaf*, LXXXII (September, 1937), 364–70.

Calls attention to factors in vocational education of the deaf which need attention: (1) more help for underprivileged pupils who cannot carry the regular course, (2) more provision for suitable training for girls, (3) local surveys of employment possibilities, (4) well-prepared and progressive teachers who are

more than "foremen" in their trades, (5) education of the whole child, and (6) training for effective living outside the institution.

266. BRADWAY, KATHERINE PRESTON. "The Social Competence of Deaf Children," *American Annals of the Deaf*, LXXXII (March, 1937), 122–40.

A research study conducted to determine the practicability of using the Vineland Social Maturity Scale in measuring the social competence of deaf children. Findings indicate that "the deaf group was 20 per cent inferior to hearing subjects in social competence throughout all age levels examined." It is stated that this scale "may be applied successfully to deaf subjects without modification."

267. CLOUD, DAN T. "Meeting the Problem of the Hard of Hearing Child," *Volta Review*, XXXIX (September, 1937), 487–89, 540.

Considers children "who have a comparatively large degree of hearing as shown by the audiometer yet are unable to use that hearing." Describes the program under way at the Illinois State School for the Deaf to meet the needs of such pupils with the assistance of hearing aids.

268. "Deaf Girls in Regular Girl Scout Camps," *Volta Review*, XXXIX (July, 1937), 391–95.

Discusses the extent of activities for the deaf in Girl Scout troops and their attendance and co-operation in Girl Scout-camps. "There is a growing tendency to believe that, when conditions are right, the physically handicapped girl should preferably be included in the activities of the physically normal scout."

269. LARUE, MARY STRICKLER. "A Plan for Retarded Deaf Children," *American Annals of the Deaf*, LXXXII (November, 1937), 445–49.

A teacher in the West Virginia State School for the Deaf describes an organization carried on there for a group of slow learners.

270. MASON, MARIE K., and BRIGHT, MARGARET GORDON. "Tempo in Rhythmic Speech Education," *American Annals of the Deaf*, LXXXII (November, 1937), 385–401.

The authors made a study of speech tempo, comparing the rate of speech of auditorially handicapped persons with that of normally hearing individuals and translating the results into musical notation. The outcome of the experiment is offered as a basis for measuring and evaluating the speech rate of deaf children and for "bringing about the desired unity of purpose in rhythmic speech education."

271. PINTNER, RUDOLF. "Latest Phases of Psychological Testing with the Deaf," *American Annals of the Deaf*, LXXXII (September, 1937), 327–37.

Discusses the results of personality tests that have been applied to the deaf and the need of broadening the concept of "education" in schools for the deaf to include general adjustment and personality development. Calls attention to the importance of having the services of a psychologist available in every school for the deaf.

ort of Retardation of Children with Impaired Hearing in New Schools," *American Annals of the Deaf*, LXXXII (May, -43.

omitted as a part of the W.P.A. (for the city of New York) Project r the Conservation of Hearing of School Children. Findings of the olving more than 600,000 children, indicate that 3.17 per cent have aring in both ears; about 4.5 per cent need otological diagnosis; 5 to 3.5 per cent need lip-reading instruction. Experience with more ard-of-hearing children points to the reduction of retardation after instruction had been received for a period of from six months to

ERIS. "Public Day Schools for the Deaf in the United States," *w*, XXXIX (June, 1937), 328–29, 377; (July, 1937), 389–90, ber, 1937), 555–57, 594–95; (November, 1937), 618–19, 660; , 1937), 690–93, 720–21; XL (January, 1938), 15–21, 60; 1938), 83–87, 114–16; (March, 1938), 133–39, 178–79.

articles dealing with the development of day schools for the deaf in States and with their relative advantages and disadvantages as vith residential schools. Written by a well-known leader in the f the deaf who has been actively connected with both residential ools.

DELICATE CHILDREN

P. "Heart Disease in Childhood," *Journal of Exceptional* V (November, 1937), 25–32.

at Mt. Sinai Hospital in New York City sketches "the major prob- it in the care of children with rheumatic heart disease." Considers al and educational factors involved.

BLANCHE H. "Inducing Open Window Room Parents To Feel ibility for Their Children's Health Habits," *Journal of Excep- dren*, IV (December, 1937), 61–63, 70.

ive secretary of the Grand Rapids Anti-tuberculosis Society makes ite suggestions on how teachers can secure the co-operation of t only in rebuilding the frail bodies of children committed to the alled "open-window rooms," but also in preventing conditions which such placement.

BERTA WEISS. "Mental-Hygiene Considerations in the Care escent Children," *Mental Hygiene*, XXI (April, 1937), 263–

d nursery-school workers carried on an experiment in the children's o hospitals to observe the extent to which nursery-school techniques sed in the situations in question. Suggestions are offered for the valescent children.

277. McGregor, E. "The Convalescent Child at School," *Crippled Child*, XV (December, 1937), 103–4.

Describes a program of educational activity under way in a general hospital in Edinburgh, Scotland.

278. "What Is the Schools' Responsibility to the Malnourished Child," *Instructor*, XLVI (September, 1937), 18, 77.

The problem is discussed from the standpoint of: (1) the rural school, by Ruth E. Grout; (2) the village school, by Maud A. Brown; and (3) schools in larger communities, by Vaughn S. Blanchard.

Speech Defectives

279. Bryngelson, Bryng. "Psychological Problems in Stuttering," *Mental Hygiene*, XXI (October, 1937), 631–39.

Identifies four aspects of stuttering and discusses the therapy relating to them: (1) the "stuttering personality," (2) the fear of speaking, (3) the neurological act of stuttering, and (4) the excessive effort utilized in breaking the spasm so as to realize speech.

280. Hahn, Eugene F. "An Integration of Stuttering Therapies," *Journal of Speech Disorders*, II (June, 1937), 87–94.

Calls attention to the confusion in the speech-correction field which is caused by the great variety of remedial treatments. Suggests a method of integrating the various treatments.

281. Hahn, Eugene F. "A Compendium of Some Theories and Therapies of Stuttering," *Quarterly Journal of Speech*, XXIII (October, 1937), 378–96.

Presents the theories with respect to causes of stuttering and therapies of Blanton, Travis, Bluemel, Fletcher, Greene, Gifford, Dunlap, and West, and a brief summary of other theories.

282. Johnson, Wendell, and House, Enod. "Certain Laterality Characteristics of Children with Articulatory Disorders," *Elementary School Journal*, XXXVIII (September, 1937), 52–58.

Report of a study conducted to investigate "certain laterality characteristics of severe functional articulatory cases." A group of forty-one children with articulatory disorders were compared with thirty-three children without such disorders. "The results of this investigation warrant the conclusion that handedness, as measured, tends to be related to severe functional articulatory defects. The findings with regard to eyedness, however, were not significant."

283. Schoolfield, Lucille D. "The Development of Speech Correction in America in the Nineteenth Century," *Quarterly Journal of Speech*, XXIV (February, 1938), 101–16.

Traces the development of the speech-correction movement in America up to 1890. Discusses the kinds of speech defects, the theories as to causes, the methods of treatment, and the results.

284. TANBERG, CLAY. "The Clinical Significance of the Symptomatology and Etiology of Stuttering," *Quarterly Journal of Speech*, XXIII (December, 1937), 654–59.

Defines stuttering on a basis of symptoms and analyzes some of the causes of stuttering and their relation to clinical treatment. Ascribes the cause of stuttering to the stutterer's general emotional instability.

285. WEST, ROBERT; KENNEDY, LOU; and CARR, ANNA. *The Rehabilitation of Speech.* New York: Harper & Bros., 1937. Pp. xxii+476.

A comprehensive treatise on diagnosis and treatment of speech defects. Corrective procedures for both adults and children are considered. An appendix includes descriptions of testing techniques and examination procedures, with suggestions for using them.

GENERAL REFERENCES

286. BRADWAY, KATHERINE PRESTON. "Social Competence of Exceptional Children," *Journal of Exceptional Children*, IV (October, November, and December, 1937), 1–8, 18; 38–42; 64–69.

A series of three articles on the use of the Vineland Social Maturity Scale with several types of exceptional children, namely, the mentally subnormal, the deaf, the blind, and the crippled. Results secured for the respective groups are compared with one another and with those found for normal children.

287. DOBBINS, ELEANOR C., and ABERNATHY, RUTH. *Physical Education Activities for Handicapped Children.* New York State Education Department, Physical Education and Recreation, Book V. Albany, New York: University of the State of New York, 1937. Pp. 56.

The bulletin is presented "to enrich the program of physical education for handicapped children, particularly those enrolled in special classes for the physically handicapped." To be used as a guide in planning recreational physical activities. Considers orthopedic cases, cardiacs, the visually handicapped, and potential orthopedic and functional handicaps.

288. GOOD, CARTER V. (Editor). "Summary of Studies Relating to Exceptional Children," *Journal of Exceptional Children.* Extra issue, January, 1938. Pp. 60.

The entire issue is devoted to a consideration of studies relating to exceptional children, including both handicapped and gifted. Gives bibliographies and summaries of research dealing with the respective fields.

289. MARTENS, ELISE H., and REYNOLDS, FLORENCE E. *An Annotated Bibliography on the Education and Psychology of Exceptional Children.* United States Office of Education Pamphlet No. 71 (1937). Pp. 42.

Includes materials from two previous editions and new material up to 1937. The references are classified in nine sections, each relating to a special phase of the problem.

290. MORGAN, WALTER E. *State Apportionments for the Education of Physically Handicapped Children in California.* Department of Education Bulletin No. 16. Sacramento, California: State Department of Education, 1937. Pp. viii+24.

Summarizes provisions of the School Code of California relating to state aid for educating physically handicapped pupils and indicates the methods of apportionment of funds.

291. PFAFF, PAUL L. "On Professional Preparation: Need for Revised Teacher Certifications," *Journal of Speech Disorders*, II (December, 1937), 199–204.

Calls attention to the need of expecting from regular teachers a better understanding of, and ability to deal with, problems of childhood behavior which, if left unchecked, lead to the necessity of clinical or institutional treatment. Certification requirements should be adjusted with this need in view.

292. RINGMAN, BERNICE. "Girl Scouting and the Physically Handicapped," *Journal of Exceptional Children*, IV (January, 1938), 73–79, 92, 93.

On the basis of attendance at the first international training course held in England for leaders of handicapped scouts, the author discusses the development of the work in England and in the United States.

293. WALLIN, J. E. WALLACE. "Trends and Needs in the Training of Teachers for Special Classes for Handicapped Children," *Journal of Educational Research*, XXXI (March, 1938), 506–26.

Considers the general status of special requirements for teachers of exceptional children, changes that have taken place in the past five years, and problems that need to be studied looking toward a satisfactory adjustment in this field of service.

Educational Writings

REVIEWS AND BOOK NOTES

A new work on classroom management.—After years of much uncertainty the subject of classroom management begins to show signs of achieving stability, of winning a recognized place for itself in the general field of professional disciplines in education. This achievement is attributable, in part, to the distinction that has been made between the activities of the teacher which are directly related to the learning process and those which are only indirectly related thereto. The first set of activities may be referred to as instructional; the second, as extra-instructional. Methods of classroom "instruction" are thus quite clearly separated from methods of classroom "management." Unfortunately, however, the two are more clearly separated in thought than in the terminology that lingers on from a lazy tradition. Since it is not illogical to speak of the management of instructional procedures, continuation of the term "management" in its present use obviously tends to becloud a distinction that in itself is quite unambiguous.

After the distinction referred to has been adopted, an author has two options: he may confine himself to the extra-instructional activities within the classroom, or he may devote his attention to those both within and without. The reviewer prefers the first of these alternatives; Tidyman,[1] however, has chosen the second. As a result, he appends chapters on professional ethics, community relations, and personal growth. His may be the better course. The question is not one of the value of the additional topics mentioned; it is rather a question of definition.

One can easily follow the general trend of the author's thought in the following chapter headings: "The Field and Its Importance," "Formulating a Philosophy of Education," "Preparing the Classroom Environment," "Guiding Pupils' Behavior," "Handling Problem Situations and Cases," "Physical Welfare Activities," "Directing School Life Activities," "Testing," "Marking, Keeping Records, and Reports," "Planning the Curriculum," "Preparing a Schedule," "The Selection and Use of Instructional Material and Equipment," "The Administration of Class Instruction," "The Administration of Group Instruction," "The Administration of Individual Instruction," "The Administration of Activity Instruction," and, finally, the three chapters previously alluded to.

[1] Willard F. Tidyman, *Directing Learning through Class Management.* New York: Farrar & Rinehart, Inc., 1937. Pp. viii+540. $2.50.

The influence of the author's long experience as a director of teacher training is felt throughout the book. He never seems to forget the immature student in the teachers' college, or in any college, who has more ambition than scholarly achievement to his credit and whose every action betrays the need expressed in Goethe's immortal exclamation, "*Mehr Licht!*" Consequently, the message of the volume is seldom concealed in erudite phrase but is brought to the student in simple language and with a practical touch.

It is difficult to be all things to all men—especially in print, where chapter and verse are matters of record. One who writes for publication must, therefore, be prepared to weather the criticism of dissenters, heretics, and common everyday faultfinders. One query in this vein, and the reviewer is through. A question may be raised with regard to the most appropriate method of handling objective source material in a work of this kind. The essential data from investigations may be presented in tabular form, or the most important data may be woven into the discussion of topics. Tidyman has adopted the second plan as possibly the simpler for his readers. It is the opinion of the reviewer, however, that, other things being equal, the first plan will be more satisfactory, especially to persons of critical or scholarly inclination.

Each chapter is followed by a liberal list of questions and a highly useful bibliography.

The book should be of real value to teachers in service and to students preparing to teach.

FREDERICK S. BREED

Rural planning.—Social maladjustments of unusual severity stimulate intense and sometimes intelligent attacks on social problems. Old panaceas are revived, and programs involving new elements are developed. Among elements generated by recent social disturbance which are characterized as new, many relate to modifying a laissez faire economy in the direction of planning. Treatises on regional, urban, and rural planning have appeared. Traditionally, however, the agricultural population has boasted of its independence and freedom from detailed regulation. Nevertheless, agricultural people are becoming less deluded regarding their independence, and extensive efforts are being made to extend planning to their domain. A timely volume[1] briefly surveys these efforts.

The book is intended as a handbook for lay and professional persons and as a textbook for classroom use in the study of rural sociology or planning. The first two of the sixteen chapters deal, respectively, with the philosophy of planning and with its general economic bases in rural areas. Human and land resources are then considered, with emphasis on population trends, rural zoning, standards of living, and ways of shifting ownership to tenants. Two chapters treat the anticipations and the results of land-settlement programs, in current American life and historically in land-conscious Europe.

[1] William E. Cole and Hugh Price Crowe, *Recent Trends in Rural Planning*. New York: Prentice-Hall, Inc., 1937. Pp. xvi+580. $3.50.

The ten remaining chapters evaluate specific phases of rural life and institutions. Each of the following topics is discussed in a chapter: social welfare, treating child welfare, care of the aged, relief, and welfare administration; juvenile delinquency, commenting on its distribution, causal factors, and treatment; crime and justice, noting inadequacies of law-enforcement agencies, possibilities of state constabularies, and needs for consolidations; rural health, describing health programs, related governmental functions, and preventive versus curative medicine; rural education, emphasizing adequacy and accessibility in terms of rural problems, guidance, and a functional state university; rural libraries, with illustrations of typical services, local possibilities, and avenues of co-ordination; rural recreation, describing available and needed agencies, types of recreation areas, and principles of recreation planning; the rural church, sketching its declining prestige and reviewing suggestions for improvement; rural government, examining problems of overlapping units, spoils politics, and possible reorganizations; and rural electrification, studying dispersion of rural inhabitants in foreign countries, problems involved in extending current to American rural homes, and trends in pertinent legislation.

Each chapter concludes with a rather extensive bibliography of comparatively recent titles. There are fifty-five figures and fifty-eight numbered tables. A subject and an author index conclude the book.

The authors have chosen significant topics around which to organize the book and have presented their materials in a manner easily understood by laymen and beginning students. Professional workers and advanced students of rural problems, however, will be familiar with much of the material. For them the book has value in sharpening general acquaintance through specific data and in citing extensive treatments and sources. The book is most useful as a review of practices and recommendations, with economically liberal emphasis, rather than as an exposition of a particular philosophy.

HAROLD H. PUNKE

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The curriculum: subject-centered or integrated?—Shall we continue to tinker with a subject-centered curriculum or shall we abandon it for an integrated program? We have had many enthusiastic subjective descriptions of teachers' and pupils' reactions to curriculums in which subject matter to be covered and subject boundary lines to be observed had no place. However, studies giving objective evidence of the values of some of these newer ventures in curriculum-building have been few in number. The public schools of Houston, Texas, now give us an appraisal[1] of a curriculum planned without subject divisions around

[1] Edison Ellsworth Oberholtzer, *An Integrated Curriculum in Practice: A Study of the Development, Installation, and Appraisal of a Certain Type of Integrated Curriculum in the Educational Program of the Public Elementary Schools of Houston, Texas.* Teachers College Contributions to Education, No. 694. New York: Teachers College, Columbia University, 1937. Pp. xvi+218. $2.35.

four central themes: interdependence, control over nature, adaptation, and cooperation. The school administrators and teachers of Houston spent approximately eight years in planning, studying, and revising curriculum materials before the new integrated program was subjected to a critical test.

Seventy-three teachers and sixteen hundred fourth- and fifth-grade pupils worked in three groups in the evaluation project. Group A used the new integrated materials with no scheduled periods, no subject divisions, no time allotments to be observed, and with skills and facts taught as the teachers thought they were needed. Group B used the new materials also and proceeded in quite the same manner as Group A except that the teachers attempted to give 50 per cent of the class time to problem-solving activities, 25 per cent to creative activities, and 25 per cent to skill-development activities. The teachers of Group B taught the skills as they were needed by their classes, but they were asked to observe certain grade standards regarding skills. Group C was divided in two parts: one half of the group used Houston's old social-studies course (a fusion course), with all the regulations on time allotments and subject periods which went with the old course; the other half used the new integrated course materials but followed the same regulations as did the other half of Group C. The progress of the three groups was measured in terms of academic achievement; reactions to the classroom procedures on the part of pupils, parents, teachers, principals, and supervisors; the quantity of general literature read by each pupil; and changes in pupil interests.

Oberholtzer's conclusions are favorable to the integrated curriculum. He concludes that pupils using such a curriculum can do as well in fundamental skills as pupils using a subject-centered program and that, because less time is used for drill, there will be more time in an integrated program for problem-solving and creative activities. There are other interesting conclusions which cannot be reported here, but the study is of sufficient importance to challenge the interest of every school worker, especially those in any way associated with the improvement of instruction.

PRUDENCE CUTRIGHT

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Principles of physical education the first step in program-making.—There are teachers who sometimes become so engrossed with the mechanics and routines of classroom and gymnasium procedures that they spend little time in contemplating the philosophy that should inspire their programs. There are administrators who, having inadequate opportunity to read sufficiently in the technical literature of the several departments of their schools, find it difficult to keep up with the modern attitudes of the leaders in physical education. The general reader seldom finds intelligible or interesting an exposition of the aims and objectives of a technical field which has been prepared for students in that field. Many members of the parent-teachers' organizations still think of physical

education in the terms of muscle-building, correction of defects, and exercise as a health measure. To these persons Sharman's discussion[1] of the sociological backgrounds and the place of physical education in a democracy will be stimulating and enlightening.

While Sharman states in the Preface to his new book that he is addressing his discussion to advanced students in training, nevertheless his book can be useful to a broader constituency.

The teacher of physical education will find discussed here the biological, the sociological, the psychological, and the educational foundations on which a philosophy can be built. The underlying motive of each discussion is to show that modern society is constantly changing; that the relations of the boy and the girl to home, school, religion, and government demand new treatment; and therefore that our principles must also change to meet these new needs.

> The first consideration in arriving at a philosophy of physical education is an understanding of the basic social philosophy of our people [p. 115].
>
> The general function of education is to help individuals make an adequate adjustment to the problems of life. Knowledge and skills are valuable in education only to the extent that they facilitate human activity and make the adjustment of the organism to its environment more flexible [p. 117].
>
> In physical education we should seek to develop intelligent co-operators and not train some individuals as docile followers and others as autocratic leaders. In a democratic society a person prepared to be a good follower should also be a good leader [p. 131].

In the later chapters of the book the author discusses the administration of physical education as set up under these principles of education. The book is consistent in presenting the necessity of some philosophy based on recent trends in biology, sociology, psychology, and education as a prerequisite for a program. Such admonition is, of course, timely for students in training, but it also might not be amiss for teachers in the field to check back their practice against some such philosophy as is expressed in this book.

JOHN F. BOVARD

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A health service for elementary grades.—Education in healthful living is one of the accepted functions of the schools. There is an increasing number of well-written books designed not only to give information but to aid in developing attitudes toward personal and public health and to give opportunity for practicing health habits. The Healthy Life Series[2] makes a desirable contribution to the books suitable for the elementary and early junior high school grades. The use

[1] Jackson R. Sharman, *Modern Principles of Physical Education.* New York: A. S. Barnes & Co., Inc., 1937. Pp. viii+208. $2.00.

[2] John Guy Fowlkes, Lora Z. Jackson, and Arnold S. Jackson, The Healthy Life Series: *Healthy Bodies*, pp. viii+216, $0.64; *Healthy Growing*, pp. viii+216, $0.64; *Keeping Well*, pp. viii+264, $0.80. Philadelphia: John C. Winston Co.

of short stories in most of the topics makes this a series of supplementary books rather than basal textbooks.

The material is that which is included in most courses in health education. It is presented positively throughout the series except in the case of a few illustrations. There is provision for repetition of certain ideas in the various books, but the presentations are different. To illustrate: In *Healthy Growing* flies are discussed in a story in which a group of children look for a good place to eat a picnic lunch. The proximity to the desired picnic site of barns and other breeding places of flies forms a natural situation. Later in the same book there is a discussion of how to fight flies in the home, accompanied by an attractive picture of a child using a swatter. In *Keeping Well* flies are considered in relation to garbage disposal. In this book there is also mention of the germs found on flies' feet in the topic "Where Microbes Hide," and a paragraph is devoted to avoiding flies. Four words, "There were no flies," are used as part of a description of the type of restaurant patronized by a touring family.

Each book has a glossary and a good index. The type and paper are satisfactory.

Each chapter has suggested "Things To Do," and many have a series of questions, "Do You Know?" which, for the most part, are good. One doubts, however, the desirability of proposing that children "ask your teacher," as is done in some of the suggestions. These suggestions might better have been placed in a teachers' manual, since they imply that the children might have to take the initiative for arranging teaching situations.

The use of the word "rules" is disconcerting in some of the places where it occurs, for example, "A list of rules for buying shoes and stockings," "Good sleeping rules," and "Rules for preventing colds."

As a whole, the books are attractive, and the story touches are interesting. Children will enjoy these books and will profit from reading them.

MARY MAY WYMAN

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Another contribution to the spelling problem.—Gates and his associates have furnished research workers in the field of spelling with a unique contribution.[1] Each of 3,876 words was carefully checked to determine the most common error or errors in children's misspelling of the word, the percentage of error which appears in the given form, the average grade placement of each word as found in various tests and courses of study in spelling, and a grade level of comprehension as indicated by a multiple-choice test of the meanings of words. While the selec-

[1] Arthur I. Gates, *A List of Spelling Difficulties in 3876 Words:* Showing the "Hard Spots," Common Misspellings, Average Spelling Grade-Placement, and Comprehension Grade-Ratings of Each Word. New York: Teachers College, Columbia University, 1937. Pp. 166. $2.10.

tion of words was somewhat arbitrary, there is no doubt that the vast majority of them are among the words most frequently taught. They are words with high social usage and some of them of great cruciality. The more we know regarding such words, unquestionably the better.

The percentage of error was determined by giving the words in a test to children "usually one grade lower than the grade in which the word was formerly taught in the curriculum of this particular school" (pp. 3–4). Since nothing in the report shows specifically what grade was tested for any particular word, research workers will meet a certain handicap in making comparisons between the percentage of error given in this book and the percentage which they may find in their own studies.

A random sampling of approximately 10 per cent of the listed words showed the percentage of error for the form given as the common error to be 50 or above in only about 2 per cent of the cases. Forty-eight per cent of the cases show a percentage of error on the form given as the common error of 25 to 48. In the case of about half the words, a single type of spelling error does not occur as often as one time in four. Hence some question may well be raised of the value to the teacher of knowing that this particular form of error does occur more frequently than any other single form. Each child, in perfecting his own spelling, should doubtless stress his attention on the correct spelling of the part of the word that he has missed. For the teacher to call his attention to a particular type of misspelling would certainly be confusing in many cases. To emphasize a particular part of the word as being troublesome is of doubtful value to pupils who have already learned the correct spelling.

The whole report represents a tremendous amount of labor, which, in the opinion of the reviewer, will probably be of much more service to research workers than to teachers.

E. J. ASHBAUGH

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The behavior of young children.—Notwithstanding the fact that the author of a new book[1] states in his Preface that "child psychology clearly should deal with child behavior" (p. 7), most of his illustrations are from historical characters or poetry or Ovid. There is no evidence that the author has a vital knowledge of children or of the revolutionary findings about the nature of children which are available from child-guidance clinics, nursery schools, and visiting teachers.

The book is intended as a textbook for beginning students in the field of child psychology, but it gives neither detailed scientific explanations, presented clearly enough to enable students to grasp the discussed concepts, nor sound practical applications which would be useful in the handling and the management of children. For example, the difficult question of instincts and habits

[1] Noel B. Cuff, *Child Psychology*. Louisville, Kentucky: Standard Printing Co., 1937. Pp. 300.

is settled as follows: "The problem of instinct versus habit, therefore, has been abandoned recently by most psychologists. Furthermore, research now tends to focus on normative surveys of behavior patterns and on the role of maturation in the patterning of behavior" (p. 46).

The tone of the book is flippant: "The big bad behaviorists then sent these instincts to the junk yard for outmoded psychology and argued that all behavior is conditioned or built in at an early age" (p. 46). In general, the statements are poorly worded and not clear: "Psychologists are now changing mores and increasing interest in the old adage, 'As the twig is bent so is the tree inclined' " (p. 51).

Recent studies in the field are usually not cited. For example, on the topic of sleep, Shakespeare, Milton, and Samuel Johnson are quoted, while the Toronto, the Minnesota, and other studies of sleep are not mentioned. Similarly on fear: Wordsworth, Ovid, Emerson, Shakespeare, Defoe, and Montaigne are quoted, but specific mention to the work of Mary Cover Jones, Jersild, and others is omitted in the text, their names being given only in the "Selected References" at the end of the chapter. After reading the section on sleep, the student would know nothing of the scientific findings about the sleep of young children.

Since there are already available a number of excellent textbooks in the field of child psychology, it seems to the reviewer that the author has failed to meet the needs of any group of students and that the book fulfils no useful purpose.

ESTHER MCGINNIS

UNIVERSITY OF MINNESOTA

A comprehensive study of children's reading.—Since educators became conscious of the fact that the interests of children in reading might be quite different from those prescribed for them by adults, many studies have been made. Lazar reports in her monograph[1] an extensive study of the reading interests, activities, and opportunities of bright, average, and dull children in greater New York. The study is timely. It is particularly significant for what it reveals concerning the differences in reading interests of dull children. If it is typical of conditions elsewhere, some of the findings are disturbing.

The pupils investigated were enrolled in thirteen schools in New York and Brooklyn in Grades II A to VIII B. These pupils were about equally divided into groups of bright, average, and dull children. Foreign languages were spoken in 40 per cent of the homes. In general, the bright children came from homes of the higher socio-economic brackets. The dull were found in the homes of skilled and unskilled workers. A detailed inventory examination was administered both to groups and to individuals.

[1] May Lazar, *Reading Interests, Activities, and Opportunities of Bright, Average, and Dull Children.* Teachers College Contributions to Education, No. 707. New York: Teachers College, Columbia University, 1937. Pp. 128. $1.60.

The results of the study will be eagerly scanned by persons concerned with the development of children's interests in reading. Comparisons may be made between this and the earlier studies of Dunn, Jordan, Terman, and others.

This study reveals that, as has been suspected, all is not well in the world of children's reading. In spite of the attempts of adults to lead children to accept their standards of what is good in reading, children are still dominantly under the influence of the series books. The weakness of these books (or their virtues, if you defend such books) is still undetermined. Yet children from all socio-economic brackets prefer them to all others.

That there is a marked relation in the socio-economic status of the home, the intelligence of pupils, and their opportunity to read is quite in accord with expectations. That schools are failing to counteract the influence of cheap and easily available books and magazines is also known.

The author's general conclusion that the way out is through more adequate provision for good literature in the school, better guidance, and the provision of easier but better-written books for dull children seems sound. Guidance is also essential for the average and the bright, since many of them fail to read books and magazines of the better types. Efforts must also be made to improve the types of reading done in the homes of the lower socio-economic levels if literature is to do its part in elevating tastes and forming character. Unless something is done, poetry promises to be the privilege of the brilliant among the adult population and of a few of the dull children who seem to show some preference for it.

Lazar's monograph, like other publications in the same series, is well written, well documented, and well organized. The techniques used in the investigation were skilfully selected and used. The investigation will undoubtedly stand as one of the important studies of children's interests. The book is especially noteworthy for the many excellent practical suggestions given in the summary and the conclusions.

G. A. Yoakam

University of Pittsburgh

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Bode, Boyd H. *Progressive Education at the Crossroads.* New York: Newson & Co., 1938. Pp. 128. $1.00.

Dearborn, Walter F., and Rothney, John W. M. *Scholastic, Economic, and Social Backgrounds of Unemployed Youth.* Harvard Bulletins in Education, No. 20. Cambridge, Massachusetts: Harvard University Press, 1938. Pp. xii+172. $1.50.

Douglas, O. B., and Holland, B. F. *Fundamentals of Educational Psychology.* New York: Macmillan Co., 1938. Pp. xvi+598. $2.50.

Education on the Air, 1937. Eighth Yearbook of the Institute for Education by Radio. Edited by Josephine H. MacLatchy. Columbus, Ohio: Ohio State University, 1938. Pp. x+374. $3.00.

ELYOT, SIR THOMAS. *The Gouernour.* Everyman's Library, No. 227. New York: E. P. Dutton & Co., Inc., 1937. Pp. xxxii+308.

FORD, FREDERICK ARTHUR. *The Instructional Program: Its Organization and Administration.* New York: Prentice-Hall, Inc., 1938. Pp. xvi+458. $2.75.

Go Forth and Teach. An Oration Delivered before the Authorities of the City of Boston, July 14, 1842, by Horace Mann. Also, Other Materials Relating to His Life. Centennial Edition. Washington: Committee on the Horace Mann Centennial of the National Education Association, 1937. Pp. viii+148. $0.50.

KEYS, NOEL. *The Underage Student in High School and College: Educational and Social Adjustments.* University of California Publications in Education, Vol. VII, No. 3. Berkeley, California: University of California Press, 1938. Pp. viii+147–272. $1.25.

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PRESCOTT, DANIEL ALFRED. *Emotion and the Educative Process.* A Report of the Committee on the Relation of Emotion to the Educative Process. Washington: American Council on Education, 1938. Pp. xviii+324. $1.50.

RELLER, THEODORE LEE. *Community Planning for Youth.* Philadelphia: Public Education and Child Labor Association of Pennsylvania (1505 Race Street), 1938. Pp. viii+110. $1.00.

The William Rainey Harper Memorial Conference: Held in Connection with the Centennial of Muskingum College, New Concord, Ohio, October 21–22, 1937. Edited by Robert N. Montgomery. Chicago: University of Chicago Press, 1938. Pp. xii+168. $2.00.

BOOKS PRIMARILY FOR ELEMENTARY-SCHOOL TEACHERS AND PUPILS

ATWOOD, WALLACE W., and THOMAS, HELEN GOSS. The Earth and Its People: Book I, *Home Life in Far-away Lands*. Boston: Ginn & Co., 1938 (revised). Pp. vi+206. $1.00.

BENNETT, MARGARET E., and HAND, HAROLD C. *Designs for Personality*. New York: McGraw-Hill Book Co., Inc., 1938. Pp. xiv+222. $1.36.

CANNON, ELIZABETH PERRY, and WHITING, HELEN ADELE. *Country Life Stories: Some Rural Community Helpers*. New York: E. P. Dutton & Co., Inc., 1938. Pp. xiv+96. $0.65.

Civics Afloat: A Report on the Use of Municipal Ferryboats in the Study of Civics. New York: Board of Education of the City of New York, 1938. Pp. 38.

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HARDY, MARJORIE. *Teachers' Manual for the Hardy Readers (Pre-Primer, Primer, First Reader)*. The Child's Own Way Series. Chicago: Wheeler Publishing Co., 1938 (revised). Pp. xvi+318.

HUNTING, HAROLD B. *Your World and How To Live in It. Teacher's Guide and General Resource Book*, pp. 146, $1.25; *Pupil's Work Book (Grades Nine and Ten)*, pp. 124, $0.35. New York: Abingdon Press, 1938.

KEEN, GRACE GRAHAM. *Ah-Ming: A Boy in China*. Harrisburg, Pennsylvania: Stackpole Sons, 1938. Pp. 178. $0.96.

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THE UNIVERSITY OF CHICAGO
Chicago, Illinois

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THE ELEMENTARY SCHOOL JOURNAL

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Educational News and Editorial Comment

A FORMER EDITOR RETIRES

The educational world has known for some time that Charles Hubbard Judd, head of the Department of Education of the University of Chicago, having reached the age of retirement, will sever his official connection with the University at the close of the current academic year. The fact of his retirement has been commented on widely in the educational and the lay press, and many educational meetings, notably those held in the late winter at Atlantic City, have been given over to doing honor to him.

The *Elementary School Journal* and the *School Review* have special reason to mark Professor Judd's retirement with a red letter. Reference to his connections with these journals may, paradoxically, begin with the assertion that in their pages he was never identified as editor by name. The nearest approach to such a designation was for the year 1917–18, when he was listed as chairman of a "joint editorial committee." Persons aware of the actual manner of operation of the departmental publications know that during the twelve-year period from September, 1918, to September, 1930, he discharged all the responsibilities of editorial direction of both

journals and of the Supplementary Educational Monographs. During this period these publications were issued as being "edited by the Faculty of the School of Education of the University of Chicago" through an editorial committee. In the list of the committee members Professor Judd's name appeared in alphabetical order and without special designation for carrying major responsibility. Even this long and arduous period of editorial direction represents merely a fraction of his service to the *Elementary School Journal* and the *School Review*, for he manifested a constructive interest in them from the beginning of his connection with the University in 1909, even during the years when others were in editorial charge. This interest, continuing throughout the twenty-nine years of his official connection with the University, has unquestionably been the most important factor in winning for these journals their present standing among educational periodicals. Although it is, by many years, too soon, in view of Professor Judd's vigor of body and mind, to undertake appraisal of his many services to American education, we venture the prediction that, when the time comes to make it, counted among his chief contributions will be his furtherance of the interests of educational journalism.

While the purpose here is to signalize the termination of Professor Judd's connection with the University of Chicago as this connection has affected the publications of the Department of Education, we are naturally led to make some reference to his service to the larger scholarly field of education through his long period of leadership in the department. A fitting way of doing so in a few words comes to hand in a statement concerning Professor Judd made by the man who will succeed him in the autumn as chairman of the department, Professor Ralph W. Tyler. The statement quoted was made at the University of Chicago luncheon during the convention in Atlantic City.

The Atlantic City meetings illustrate the high regard in which Mr. Judd is held by all the varied educational groups gathered together here. This convention has been a continuing series of tributes to him. Those of us who have been students at the University of Chicago, having had closer contacts with him, are particularly conscious of his stimulation and direction.

Among the many contributions Mr. Judd has made to my thinking about

education, there are three which have profoundly influenced me. They have colored my work and my outlook.

In the first place, Mr. Judd emphasizes the fact that human behavior is more complex than the action of a machine and is not helpfully interpreted in mechanistic and atomistic terms. This idea has continually directed my work in testing.

In the second place, he has iterated and demonstrated the idea that educational problems can be most effectively solved through careful study and the collection of pertinent evidence rather than through heated discussion. This point of view has been to me a guiding stimulus for educational research.

In the third place, he has stood for thorough rather than superficial study of educational problems. At a time when social problems are being settled by tradition or by offhand solutions, the emphasis on fundamental investigations and thorough studies of all relevant aspects has been particularly salutary. It has given us an impressive ideal to counteract the temptation of spectacular superficiality.

To assume the chairmanship of the Department of Education when Mr. Judd retires is a deep privilege and a great responsibility. As far as I can, I shall use my influence to continue these same three emphases.

In addition to containing appropriate commendation of essential features of Professor Judd's educational leadership, the statement is indicative of the point of view with which the new chairman comes to the department.

The Regents' Inquiry Plan for District Organization in New York State

An Inquiry into the Character and Cost of Public Education in New York State was organized in 1935 under the direction of a special committee of the Board of Regents. This inquiry will constitute the most extensive and searching examination of a state school system that has yet been made in the United States. A preliminary pamphlet dealing with the improvement of district organization has recently been issued. The final report of the inquiry, together with the supporting studies, will be published in the course of the next few months.

The following paragraphs from the preliminary pamphlet are quoted from a recent issue of the *Journal of the New York State School Boards Association.*

Before proceeding to reorganize the school districts of the state, it may be desirable to outline the kind of a school district we want, just as an architect

makes a sketch of the building he wants before the detailed plans are drawn. On the basis of many conferences throughout the state with school administrators, board members, teachers, parents, taxpayers, and others, the following elements of a good school district may be outlined.

Every school district should:

1. Contain enough children so that a well-balanced, elementary- and high-school program can be maintained economically;

2. Be so arranged geographically that schools may be conveniently located and transportation, where necessary, easily arranged without requiring long routes;

3. Contain sufficient assessed valuation and taxpaying capacity to carry the bulk of the school program;

4. Coincide as far as possible with the natural community boundaries and, where possible, with local government units so that co-operative services may be arranged, particularly in connection with health, traffic control, planning, recreation, the joint use of plant, and proper management of the public debt;

5. Keep the schools and the government of the schools close to the people so that the citizens generally, including the parents and the taxpayers, may know what their schools are doing, may have an effective voice in the school program, and may participate in the community use of the school building.

These last two factors, relation of the school to the natural community and closeness of the school to the people, are of first-rate educational significance and are not to be sacrificed in the interest of "efficiency." If such a sacrifice is made to establish economical districts, we will find in a generation that something of deep significance which money cannot buy has been destroyed.

The statement of these objectives makes it clear that it will not be possible, in the state of New York, to construct school districts, all of which can fulfil satisfactorily all of these requirements. For example, in areas where population is very sparse it will not be possible to organize districts which have enough children without making unduly long transportation routes necessary. Under these conditions, there will have to be a compromise. In some areas the effort to secure sufficient assessed valuation and children would take the schools too far away from the people. Here again, there will have to be a compromise. It should be clearly understood, however, as has already been indicated, that the centralization of districts to bring about the objectives here stated does not mean that we can or should abolish all of the small one- and two-room schools in the state. This cannot be done. If it were attempted, it would substantially injure the educational system. It is a well-known fact that in many districts which have already established central rural schools, individual one-room schools have been continued where this was thought desirable, particularly to avoid the transportation of young children over long routes, or the necessity of their starting too early in the morning or returning too late in the afternoon. The ideals which are here stated and which grow out of the experience of this state

should, however, guide the state of New York in the revision of the district system.

How can the state of New York transform its outmoded system of school districts into a more satisfactory and modern system so that the children of the state may all have the benefits which are now given only to those in the larger school districts? By extending the central rural school system to the whole state, cities would, of course, be omitted, and large central districts would not be affected. The plan of action for getting this result promptly which has been worked out by the Inquiry is designed to make full use of the democratic process, so that the district boundaries, when drawn, will fit local sentiments, conform to community needs, make possible effective educational administration, result in economical management, and lessen disparities in economic resources of local districts so that true equalization will be brought about. To this end, it is suggested that there be created, by law, a temporary state commission of five which will work with the aid of an expert staff, and which will appoint eight regional school district committees, one in each of the non-city judicial districts of the state, with representatives of each county.

These regional committees will prepare the initial plans for the new central districts. They will hold hearings locally, so that individuals and communities may be fully heard. The plans, as presented, will show the general program of education for the area, the location of schools, the existing and estimated school population, the length of transportation routes, and the estimated immediate building requirements, if any. The state commission will confer with the regional committees and outline certain desirable standards as to size of school units and transportation limits and will assist them in their work. But the origination of the new district design will rest with the regional committees throughout the state. These plans will then be presented to the state commission, which will examine them to make certain that they fit together properly and form a comprehensive system for the state as a whole, and meet the educational and fiscal requirements insofar as this is possible. Where necessary, plans will be modified in conference with the regional committees. Finally, on the basis of the revised plans, the new district boundaries will be fixed by action of the commissioner of education as under the present law, with a further final appeal, in case there are any objections, to the Board of Regents.

The organization of the new districts will be completed by the calling of a district meeting and the election of a board of education under the existing provisions of the central rural school act. It should be noted also that this act, the provisions of which will govern the new districts established, continues in operation all of the schools brought together in the centralized district until the voters of the original district vote to close the school. This is a further guaranty that no "little red schoolhouse" will be abolished by the program here recommended, until those who live around that school vote to close their school and have their children go to the central school.

Here and There among the Schools

Activity programs for schools of the "middle-of-the-road" type.—Robert E. Scott, county superintendent of schools, and Jessie E. Taylor, assistant county superintendent of schools, Hennepin County (Minneapolis, Minnesota), are authors of a bulletin bearing the title *The Activity Program—Its Theory and Practice in Hennepin County*. In the following statement quoted from the Foreword the authors make a clear-cut classification of schools on the basis of attitude toward the activity program and, at the same time, describe the general purpose of the bulletin.

Schools may be roughly divided into three groups when considering attitudes toward the activity programs:

1. The traditional school, in which the subject matter is taught in close adherence to a uniform curriculum; the goal is the covering of the subject matter, stipulated for a given grade each year, through the use of uniform textbooks.

2. The "child-centered" school, in which the teaching is entirely informal and based upon the activity program; no definite curriculum is followed; the goal is child development through complete self-expression and guidance; a type which is mostly in the experimental stage as yet.

3. The middle-of-the-road type of school, between these two, which, while it adheres to the traditional or formal type in that it follows a more or less definite course of study and a uniform text is usually followed, [uses these] more as a means to an end rather than as an end in themselves; the goal is child development; activities supplement or enhance the curriculum, and thus the child, rather than subject matter, is the center of the program.

It is to this last group that many of our Hennepin County schools belong. In order that more of the teachers may feel the value and need of child experiences through activities, to meet the goal of child development, this short discussion of the activity program, together with briefs of actual activities which have been, or are being carried out in Hennepin County, is presented.

The latter part of the bulletin contains descriptions of twenty activities illustrative of the projects carried on in the elementary grades of schools of various types in the county.

The reorganization of the primary department of the Forest Park (Illinois) public schools.—We have received a bulletin entitled *Primary Department of the Forest Park Public Schools*, which contains material explaining the new program that Superintendent Welborn S. Dimmett is putting into effect in his school system. The essen-

tial characteristics of the reorganized primary school are described as follows:

The primary department under the new program will be a large classification including what is now organized as the kindergarten and Grades I, II, and III. Those children who enter at five years of age will remain four years in this department, while those who enter at six will spend only three years. Groups of pupils of equal age, like habits, and similar social maturity will be assigned to the various primary teachers. It is the duty of the teacher to direct the learning of the pupils on the levels at which they are capable of developing understandings. All children in one group, however, will not be able to carry on learning at the same level. Some will be far in advance of the others. The teacher, however, directs learning on the particular level at which each individual is capable of learning. Thus, some children who have spent three years in the primary department (in the third grade under the traditional system) may be able to read only material of first-year difficulty. These children continue to use first-year material and are trained in the fundamentals of reading until mastery and then are advanced to the reading of material of greater difficulty. The attempted reading of material of third-grade difficulty by such children is hopeless and harmful to their attitudes toward future work. On the other hand, if a child is a fast learner and is able to read third-year material in his second year, he is not sent ahead to an older group where his immaturity would hinder further progress and make him maladjusted socially. He is given material of the third-year difficulty in his second year. Each pupil is trained at each level in the materials of the primary department until he masters them, yet he keeps progress with his class. The teacher instead of teaching only first-, or second-, or third-grade materials, teaches at all levels, depending upon the needs of the children in her group.

While in the primary department, some children acquire only the minimum essentials, whereas others gain a much richer experience. All work, however, is done on the level at which the child is capable of learning. The normal child does not advance too rapidly and enter classes where he does not fit socially nor does the retarded child remain in a grade and find his new classmates much younger socially. The fast learner and the slow learner acquire the same materials and habits in the primary department, but the fast-learning pupil goes far beyond the bare essentials and acquires a great enrichment of the materials taught.

Reading is not studied as a subject by itself but is taught in connection with various activities and problem-solving situations where the child desires to gain information and understandings. Likewise number relationships will be taught when situations and activities arise in which a knowledge of numbers is necessary. The child will live every situation, and everything taught will have a definite meaning and use in activity. There will be no rule-learning and

memorization, everything learned will have a function and purpose in some activity carried on by the child.

The Detroit plan of disseminating information concerning the work of the public schools.—The Board of Education of Detroit organized last year a Division of Informational Service for the purpose of furnishing information, both to the teaching personnel and to the general public, concerning the activities, services, and facilities of the public schools. The purposes and activities of the division are described as follows in a leaflet published by the Board of Education:

Within the school system, the division's function is threefold: (1) to compile data and gather information which will aid members of the staff and various departments to carry on specific activities; (2) to prepare for publication certain periodical reports concerning necessary data and to centralize their distribution to staff members; (3) to further interchanges among the specialized personnel by informing members regarding developments affecting the public schools through the dissemination of information.

The function of the division also includes the supplying of information concerning the educational program to all groups, both lay and professional, outside the school system. Informational service aims, through various means and devices, to make the "public schools more public" by aiding the public in securing a more complete understanding of the schools, their functions, accomplishments, and costs.

General activities.—A great deal of effort is devoted to answering inquiries as to the curriculum, courses of study, projects, facilities, duties of the personnel, and the like. An average of 125 letters and questionnaires per month seeking detailed and technical information are referred to this division for reply. These inquiries, coming from all over the nation, from individuals, business organizations, colleges and universities, parent-teacher groups, professional organizations, and the like, often involve, also, the sale of courses of study and the furnishing of lists of school publications.

Each day, many individuals representing lay and professional organizations call by telephone or appear individually for interviews, seeking information relative to specific phases—financial, educational, or legislative. Such groups include the League of Women Voters, Council on Education, parent-teacher associations, local, state, and national teacher groups, other educational institutions, social-service organizations, community and metropolitan newspapers, commercial associations, and child-study groups.

News releases concerning the schools or the Board of Education are centralized in this division. These releases are prepared for distribution to community, foreign, and metropolitan newspapers as well as to lay magazines, and furnish information regarding activities within the schools which would be of interest to the general public.

A related activity centers around the writing and editing of articles describing specific phases of the school program for publication in educational magazines and professional journals. The writing, editing, and publishing of certain publications descriptive of the activities of the schools are carried on here.

From time to time a report concerning current developments affecting the schools is issued to members of the Board of Education and certain members of the administrative staff.

Ways and means of keeping parents more adequately informed concerning the program of the schools are devised in this division, and certain reports sent to them are reviewed here. . . . .

Developmental activities.—The division co-operates, by gathering and compiling data and preparing summary reports, with the professional staff and the various departments in initiating and promoting proposed building projects, school legislation, developments of certain educational policies, and teacher-welfare activities, and in aiding the advancement of educational projects of a general nature.

Speakers' bureau.—The division conducts a speakers' bureau which supplies qualified speakers to all types of groups including clubs, churches, parent-teacher associations, luncheons, and the like, located in the metropolitan area. The professional staff of the public schools co-operates with the bureau in carrying on this function. The personnel of the bureau, each member of which is prepared to discuss some specific phase of the schools, legislative, educational, financial, and the like, consists of approximately seventy-five speakers selected from all parts of the school system. Speakers are furnished without charge, and may be secured by calling the Board of Education, Division of Informational Service, Cherry 7150.

Auxiliary activities.—In order to carry on information service, an up-to-date file of information concerning personnel, curricular changes, financial data, buildings, new projects, salary schedules, and the like is maintained. An accumulative reference index of correspondence furnishing information is systematically kept. A complete record of the addresses delivered by speakers of the Speakers' Bureau is filed. Courses of study, school publications, department forms and bulletins, data concerning school legislation in the state as well as in other states and the United States Congress, are also classified for reference in this division.

In addition to a director, the staff consists of three persons aided by a secretary and two stenographers. One individual devotes his time chiefly to financial phases, and two to writing and editorial work.

A program for the elimination of failures in the elementary schools.—From K. O. Knudson, principal of the Las Vegas (Nevada) elementary schools, we have received the following account of the method that he employs to reduce failure and repetition.

An admission class was created called I C (it might be called by any other name), through which every child must go before he is admitted into the regular first grade, called I B. By this method every child who needs a year and a half in the first grade (I C, I B, I A) progresses without failure, but a child who is average or above will be taken from the I C group and put into the I B group *at any time* of the year, thus spending only the regular two semesters in the first grade.

The pupils in Groups I C, I B, and even I A might be in the same room but recite in different units. The child is not conscious of his classification, but the report to his parents carries the group designation on it.

Children who have been placed in other grades of our system and who have been found unable to do the work, are immediately moved to a new grade level where they *can* have some measure of success in their work. This placement, however, is made only after due consideration has been given not only to mental ability but also to physical and social development.

If several children of any grade are found unable to do the work, they are classified as a C group and are given one and a half years in that grade, the same as is done in the first grade. This procedure eliminates the greater percentage of failures throughout our system.

Unemployed Youth in New York City

The following statement is quoted from the *New York Times*.

Nearly half of the young men and women in this city are suffering from lack of economic opportunity, the Greater New York Fund reported . . . . on the basis of a study just completed by the Welfare Council. A sampling of 1 per cent of the population between the ages of sixteen and twenty-four indicated that about 400,000 young New Yorkers were unable to find jobs.

"This situation challenges the resources of every agency in the community," said Winthrop Rockefeller, executive vice-chairman of the fund, which will seek $10,000,000 next month in behalf of private social groups.

"Experienced social workers agree that it may be only a short step from youthful discouragement to youthful delinquency. Yet many welfare and health agencies, which comprise with us the Greater New York Fund and are devoted to guiding the city's youth, find their resources badly strained."

The sampling made by the Welfare Council was believed to be "a fair cross-section of all social, economic, racial, and cultural groups in the city and hence to represent conditions in all classes of the population." The percentage of youth unemployment for the city as a whole was put at 47.8.

A Note on "The Effectiveness of Checking Subtraction by Addition"

The February issue of the *Elementary School Journal* carried an article by Foster E. Grossnickle entitled "The Effectiveness of Checking Subtraction by Addition." Grossnickle's investigation was

also reported in *Practical Values of Educational Research*, Official Report of the American Educational Research Association, 1938. We have received from Howard Easley, of Duke University, the following critique of the article.

It must be confessed at the outset that the writer is not so much concerned here about the effectiveness of checking subtraction as with the reasons why, after Grossnickle's experimental attack on the problem, the facts necessary for a valid conclusion are still lacking. There are a number of errors in the study cited, which may be listed, in reverse order of their seriousness, as (1) errors in statistical techniques, (2) errors in experimental procedures, and (3) errors of interpretation. (The last mentioned are related to the most fundamental type of error, namely, that of wrongly setting the problem.)

1. For determining the reliability of the differences between the mean number of errors in checking and non-checking tests, the formula $P.E._{diff.} = \sqrt{P.E._{M_1}^2 + P.E._{M_2}^2}$ was apparently used. This formula takes no account of the correlation between the tests. A small and, according to this formula, unreliable difference might be very reliable if it were found in all or in the great majority of the tests of individual children. While no mention is made of the correlation between the two tests, it is inconceivable that they should not have been highly correlated, that is to say, that the children who made high scores on the checking test also made high scores on the non-checking test. The correct formula (the general formula, of which the one used is but a special case) would then be: $P.E._{diff.} = \sqrt{P.E._{M_1}^2 + P.E._{M_2}^2 - 2r_{12}P.E._{M_1}P.E._{M_2}}$. Let us suppose, for example, that the correlation here was .80 in each grade. Then, the use of the correct formula would have yielded critical ratios as follows:

Grade	Critical Ratio Reported	True Critical Ratio if $r = .80$
III	2.08	4.47
IV	1.72	3.65
V	3.14	5.06
VI	2.83	6.02
VII	0.05	0.11
VIII	1.13	2.41
IX	5.85	10.45
XIII	0.49	1.03
XIV	2.25	4.11

In the original report, but one critical ratio (that for Grade IX) was large enough to indicate a reliable difference, and the conclusion was drawn that checking is valueless as a means of securing accuracy in subtraction. When the critical ratios are corrected with an assumed correlation of .80, five of the nine are large enough to indicate complete reliability, and a sixth nearly so. It is true that two of these favor the non-checking tests and that, but for other

errors which will be pointed out later, we might still suspect that checking is valueless. Here, merely the error in the statistical techniques is considered.

2. For determining the effectiveness of checking, twelve weeks' practice in subtraction and checking was given to a group of third-grade pupils. Yet no data are given on what would have happened to this group (or what did happen to a comparable group) without the checking practice. It is possible that the group reached a very high level of accuracy as a result of this practice in checking. The control-group technique is, of course, not the only procedure available, and here the method of testing with and without checking was used. No attention was given, however, to the practice effect of the test. It appears that the same test was given *without* checking one week after it was given *with* checking. The rotation of groups, or its experimental equivalent, would surely be dictated in such a case.

3. The most serious limitation of the study lies in its lack of appropriateness for solving the problem. (*a*) The problem seems to be (and the author's conclusions bear out this statement) whether checking is a useful device for learning, or acquiring, accuracy. Yet the only measures of the effectiveness of checking are cross-sectional, or at a given level of accuracy. No indication is given of the effect of checking during the learning process. It is difficult to see how a summary of errors made during the whole twelve weeks of practice gives any results significant for learning, since these errors are largely errors in checking, and not in subtraction, and since no trends whatever are shown during the twelve weeks. (*b*) It is true, as shown, that checking takes time. Nevertheless, the significance of the time loss or saving needs careful interpretation. The study shows that checking is an uneconomical device to use once a pupil has attained a certain level of accuracy. It does not show that checking is an uneconomical device to use in reaching this level of accuracy.

Beyond the scope of this study lies the possibility that, aside from securing accuracy, checking may be a useful device for teaching the full meaning of subtraction—or the full meaning of the quantitative relations between numbers, of which subtraction is only one of the faces. Indeed, it may well be wondered whether in this study checking was *taught* as a process or merely *required* as a mechanical trick.

Conference of Administrative Officers of Public and Private Schools

During the week of July 18–22, 1938, a conference of administrative officers of public and private schools will be held by the Department of Education of the University of Chicago in the Club Room of Judson Court, College Residence Halls for Men, for the discussion of important problems in school organization, administration, and supervision. The morning programs will consist of lectures by members of the Department of Education and visiting

instructors and the afternoon programs of separate round-table discussions for superintendents and principals. Programs of the conference will be mailed to anyone applying to Professor William C. Reavis, Department of Education, University of Chicago.

Room and board will be provided, to the extent of the available capacity, in Judson Court for the week, Monday to Friday, for sixteen dollars. Reservations may be made through William J. Mather, Bursar of the University of Chicago.

The conference is open without fee to students registered in the summer quarter and to administrative officers of public and private schools who desire to attend. The general theme of the conference, for which the complete program is given below, is "Critical Issues in Educational Administration."

Monday, July 18

BEARING OF SOCIAL AND ECONOMIC CHANGE ON PUBLIC SCHOOL ORGANIZATION AND ADMINISTRATION

"Change in Composition and Character of the School Population," John Dale Russell, Professor of Education; Secretary of the Department of Education, University of Chicago

"Change in Ability of Urban Units To Support Schools," Newton Edwards, Professor of Education, University of Chicago

"Change in Opportunities Provided by Society for Youth after Leaving School," Paul W. Terry, Head of Department of Psychology, University of Alabama; Visiting Professor of Education, University of Chicago (Summer, 1938)

Tuesday, July 19

MAINTAINING THE PROPER BALANCE BETWEEN GENERAL AND VOCATIONAL EDUCATION IN URBAN SCHOOL SYSTEMS

"What the Federal Government Might Do To Assist," Floyd W. Reeves, Professor of Education, University of Chicago

"What City School Systems Might Do To Improve the Present Situation," George A. Works, Professor of Education; Dean of Students and University Examiner, University of Chicago

"What Separate Vocational Schools Have Contributed to the Solution of the Problem," William F. Rasche, Principal, Milwaukee Vocational School, Milwaukee, Wisconsin

Wednesday, July 20

PROVIDING EFFECTIVE GUIDANCE UNDER PRESENT CONDITIONS IN ELEMENTARY AND SECONDARY SCHOOLS

"Delimit Guidance and Restrict Efforts to Services That the Schools Can Actually Provide," William C. Reavis, Professor of Education, University of Chicago

"Guidance Functions That Can Be Performed by Teachers and Regular School Officers," DeWitt S. Morgan, Superintendent of Schools, Indianapolis, Indiana

"Guidance Functions That Should Be Attempted Only by Specially Trained Functionaries," Frank N. Freeman, Professor of Educational Psychology, University of Chicago

Thursday, July 21

DEVELOPING EFFECTIVE TYPES OF IN-SERVICE TRAINING FOR TEACHERS IN URBAN SCHOOL SYSTEMS

"Improvement of Instruction in High Schools," Frank A. Jensen, Superintendent, La Salle–Peru Township High School and Junior College, La Salle, Illinois

"Clinics for Pupils Deficient in Fundamental Subjects," William S. Gray, Professor of Education; Executive Secretary, Committee on the Preparation of Teachers, University of Chicago

"Competent Supervisory Leadership," E. E. Oberholtzer, Superintendent of Schools, Houston, Texas; Visiting Professor of Education, University of Chicago (Summer, 1938)

Friday, July 22

MEETING THE PROBLEM OF POLITICAL INTERFERENCE IN CITY-SCHOOL ADMINISTRATION

"The Nature and Significance of Political Influence in City-School Administration," Nicholas Moseley, General Education Board, New York City

"How To Meet the Problem of Political Interference with a Sound Public Relations Program," Nelson B. Henry, Associate Professor of Education, University of Chicago

"The Selection of Personnel through the Introduction of Civil-Service Administration as a Means of Eliminating Political Influence in the Administration of City Schools," A. R. Hatton, Professor of Political Science; Head of Department of Political Science, Northwestern University

WHO'S WHO IN THIS ISSUE

DOUGLAS E. SCATES, director of research in the public schools of Cincinnati, Ohio. ROSCOE PULLIAM, president of the Southern Illinois State Normal University, Carbondale, Illinois. ROBERT C. WOELLNER, assistant professor of education at the University of Chicago. FRANCES DURLAND, formerly extension instructor in creative dramatics at the University of California. MABEL RUDISILL, associate professor of education at Western Kentucky State Teachers College, Bowling Green, Kentucky. JAMES F. ABEL, chief of the Division of Comparative Education of the United States Office of Education.

FACT-FINDING AND RESEARCH IN INDUSTRY AND PUBLIC EDUCATION

DOUGLAS E. SCATES
Public Schools, Cincinnati, Ohio

There are three aspects to the fundamental question of the place of research in public-school systems: (1) At what points in the conduct of public education is research necessary and appropriate? (2) What types of fact-finding are called for at the various points? (3) What form of organization is best for carrying on the various fact-finding services?

When these questions are considered, it will be helpful to study the place which industry has accorded specialized fact-finding and exploration. Consider first industrial research in the large. In the competitive struggle for attaining an advantageous efficiency, has private industry found that research pays its way?

For any informed person, to raise this question is at once to answer it. That the great industrial concerns of the country support research extensively is common knowledge. The fields of transportation and communication are outstanding in their use of research, but all branches of industry and commerce which are making rapid progress are dependent on the continuous activity of research agencies. When a person seriously considers the matter, he quickly becomes conscious of the difficulty of comprehending the large place which research occupies in our national life.[1]

A careful analysis of the facts leaves no room for question that research is regarded as a profitable function by aggressive American industry. The first inference for education may be drawn by ob-

[1] Some basis for an idea of the extent of industrial research may be obtained from an inspection of the list of industrial research laboratories in this country. For example, see: (*a*) Clarence J. West and Callie Hull (compilers), *Industrial Research Laboratories of the United States*. Bulletin of the National Research Council, No. 91. Washington: Research Council of the National Academy of Sciences, 1933 (fifth edition); (*b*) *Recent Economic Changes in the United States*, I, 106–11. Report of the Committee on Recent Economic Changes of the President's Conference on Unemployment. New York: McGraw-Hill Book Co., Inc., 1929.

serving that, if research is an indispensable function in competitive economic enterprise, where efficiency is the watchword, there should be no question about the appropriateness of devoting a portion of educational expenditures to research. In fact, it may be proper to raise the counter-question: Are school boards and school administrators properly discharging their responsibility for the wise and efficient expenditure of public funds when very little is spent on research in public schools? If industry has found it necessary to expend significant sums for increasing the serviceability of its product, for increasing the efficiency of its processes, and for improving its operating organization, is public education not likely to be put on the defensive for having spent so little in the improvement of its functions?

One may answer that administrators are constantly striving to improve education, that supervisors are working to improve instruction, and that teachers are securing more training in order to improve their work. These strivings, of course, represent a significant force in the progress of American education. Capable administrators in industry do not, however, supplant research; they demand it. Technically trained workers do not disdain carefully gathered facts concerning their work; they depend on them. Research service is not competitive with regular processes; it is a supplementary service designed to provide line workers with assistance in studying important problems which, because of their regular duties, they do not have time to attack.

POINTS AT WHICH FACT-FINDING IS NEEDED IN INDUSTRY

The need for research in education becomes more convincing when detailed examination is made of the points at which this service is important. With regard to the first of the three questions which were stated at the outset, practices in industry may be examined as a basis for drawing conclusions in the field of education. No distinction will immediately be made between routine fact-finding and the more complex activities which may be regarded as true research. If consideration is first given to the entire range of fact-finding services, whether routine or investigative, a better picture can be derived of the extent to which a producing enterprise depends on facts, and a

better perspective can be obtained for the strictly research activities.

In the productive phases of industry, it is noted that raw materials received are checked for quantity and are frequently tested to see that they fulfil specifications. In addition to such routine operations, raw materials are studied to see that they are well adapted to their purpose. Should new specifications and standards be established? Would other materials serve better?

Machinery and the other tools which industry employs for work on raw materials are subjected to frequent checking with gauges to see that they are within allowable limits of error, and the gauges are themselves checked against master gauges. The design of tools is constantly being studied in efforts to make them more efficient and less subject to human error.

Industry also gives much attention to processes. Studies are made periodically to describe what is taking place in the plant. Comparative studies check procedures against those in other enterprises and against past performance. Analytical studies are made to locate and describe difficulties, to pick out causes, to ascertain sources of waste and delay, etc. Exploratory studies are carried on to see whether there are better ways of doing the job and to ascertain what variations should be made in the process according to variations in the raw material received. Research attention is also given to the discovery of new basic principles which may change entirely the process of manufacturing being used.

As processes are applied to raw materials, numerous checks are made on the developing product. Inspections, tests, and other forms of control are imposed at various stages. The number of items produced or in process in each department is ascertained and reported. Research establishes mechanical and chemical standards for the products and determines limits of tolerance. Exploratory studies seek to discover new products that a company might make.

Scientific attention must also be given to marketing. Sales are studied, underlying factors are analyzed, and competitive practices and relative success are studied. A recent development in sales promotion, known as market analysis, studies the present market and explores possibilities of new markets. Buying habits of people, their

preferences, their wants and desires are studied in detail. In the light of information revealed by such studies, the product is continually adapted to its market.

In addition to studies of production and marketing, industry constantly studies auxiliary phases of its work. For example, in the field of personnel, research is carried on to find out what kinds of persons are most satisfactory for the jobs to be done and what are the best methods of selecting those persons and rating them for retention and promotion. The general economic situation also is made the subject of study by large concerns as a basis for orienting and controlling both production and marketing.

In short, it is normal for industry to make special study of its raw materials and supplies, its tools, its processes of production, its product, its market, its personnel, its finances, and its relation to the general economic situation. Extended illustrations of all these activities can readily be found, showing that definite, quantitative information is called for, as a basis for control of operations, from the beginning of industrial activity to the end, with exploratory and experimental work at many points along the line.

OPPORTUNITIES FOR FACT-FINDING IN EDUCATION

Attention may now be turned to the activities of public education to see whether like information is needed at comparable points. In the case of the raw material, namely, the children, there is, as in industry, accounting for the quantity received. More important, however, is the analysis of the quality. The schools cannot choose their children, and, except in extreme cases, they cannot set up specifications determining who may attend. Public education is thus more handicapped than is industry in supplying a product that is always up to certain standards. Schools can, however, study the children received and ascertain the pupils who are ready for normal first-grade work, who should receive special treatment in the first grade, and who should receive special care and a special curriculum all through their school careers. Thus psychological examining and visiting-teacher work parallel what industry does when it tests its raw materials.

The tools of education are chiefly the school equipment and in-

structional materials—textbooks, workbooks, and other educational supplies. These must be selected with care and must be subjected to continual study to assure that they are adapted to current needs. The suitability of materials used for instruction is basically dependent on judgment, but such judgments are improved when supported by the many facts which careful analyses and systematic comparisons can adduce. Educators do not have gauges as refined as those used by industry in testing tools, but there is as great a need for exercising constant watchfulness by whatever technique is available. Educators cannot afford to let the matter go by default because their task is more difficult.

Carrying on the analogy, education is in need of constant study of its processes. These constitute the heart of educational work in the same way that manufacturing processes are vital in industrial production. Instructional activities must be adapted to the varying nature of the raw materials and to the changing needs of society. Education should not only make descriptive studies but should also undertake large experiments to explore untried possibilities. Here, perhaps more than at any other point, it is imperative that education provide for bold experiments in discovering and evaluating new processes.

Industry checks its product at strategic stages. The parallel in education is achievement testing at reasonably frequent intervals. Testing of some kind is probably carried on by every teacher in every classroom, but a certain amount of standardized testing is also appropriate. It is desirable to compare certain phases of the product with external standards, such as test norms that are well established. Having an extremely complex product to develop, schools should have a large variety of checks. One problem for school research is to develop better means of evaluating the many different phases of their product.

The industrial analogy does not cease with production. There are various phases of marketing that are equally important for education. It may not be proper for education to follow industry in its methods of sales promotion, but education can and should follow industry in cultivating general good will and in adapting its product to the market. As industry has turned its eyes outward and has

studied the ways in which its product does or does not fit needs, so education can profitably give a large amount of attention to the needs and the wishes of the society which it serves. Universities have made job analyses; vocational counselors study current vocational needs; and curriculum-makers give some attention to current adult life. In general, however, market analysis by public schools is an unexplored and an unrecognized field for study. Yet the questions to be answered in this area are fundamental in the orientation of public education.

The auxiliary phases of education present the same problems as those found in industry. In the field of personnel there are problems of selection, placement, development, stimulation, etc. It is probable that personnel problems in education are more important than they are in industry, because the product in education normally depends on the teacher to a larger extent than a manufactured commodity depends on the operator. Many of the processes in manufacturing are automatic or semiautomatic and do not vary markedly with the mood and psychology of the operator; in the case of education the personality and the mood of the teacher are vital. Further, teachers, being professional workers, are given a reasonable latitude of discretion and are not under immediate supervision and control. Finally, it is not so readily possible to observe small variations in the product of teachers' activities as it is in manufactured articles. For these and perhaps other reasons the personnel factor is more important in education than it is in industry. Problems in this field should accordingly receive a large amount of continued study.

Lastly, schools must be as much concerned as is industry about the general economic situation. Public schools do not have to sell their product, but, contrariwise, they cannot increase their income by increasing their efforts. Neither is it possible for them to reduce their production load when the economic situation is unfavorable, and they are therefore forced to continue "at a loss." The schools are under the need of studying the regularity of their income and taking steps in the direction of stabilizing it so as to assure a working revenue commensurate with their task.

From such a survey of the large phases of education, it becomes apparent that in education there are the same opportunities and the

same needs for systematic fact-finding and specialized study as there are in industry. Both enterprises must give attention to the materials on which they work, to their equipment for work, to their methods and processes of work, to their organization for work, and to the relation of their efforts to the rest of the world.

TYPES OF FACT-FINDING SERVICE

Having traced through the points at which factual knowledge is essential, in both industry and public education, the kinds of information which are called for may be considered and attempts made to classify them. Such an analysis will provide an answer to the second question raised at the outset.

It appears that the processes of ascertaining, analyzing, and reporting facts of various kinds may be grouped under six heads.

1. *Accounting.*—Accounting is the simplest and most routine of the six types of work. It embraces a systematic recording in appropriate categories and a periodic summarization. In industry there is accounting for stock, for items produced, for sales, for money, for time spent, etc. In public schools the needed accounting is of the same type and is concerned with pupils, teachers, time, money, supplies, and equipment. This level of fact-finding is clearly outside the field of research, but it is of large importance and must be properly provided for.

2. *Checking.*—In industry, routine inspections, checks, and tests are made for the purpose of controlling the product or the operations and keeping them within specified limits of variation. This type of activity is essentially a matter of applying routine tests over and over to the same kind of thing. Checking detects unsatisfactory conditions before it is too late, that is, before additional money has been wasted or before a substandard product has been placed on the market. In education the checking process is represented by achievement and personality testing. In addition to the informal checks regularly made by teachers, it is desirable to make comparisons with accomplishments elsewhere, by means of standardized tests systematically administered.

3. *Reporting.*—Accounting and checking should result in reports to administrative officers. Where these reports are complex and re-

quire the exercise of technical judgment in adapting gathered facts to a purpose, as in selecting, collating, and perhaps interpreting them, it seems appropriate to recognize a separate level of service. In education many reporting services are required, for internal administration and for external groups. Detailed financial analyses may be made; annual reports on various phases of school work are made to the state department; the federal government requests biennial reports; and the National Education Association asks for co-operation in survey studies. There is also the superintendent's annual report to the community. This third class of work varies widely in the degree to which it is routine; it is not ordinarily to be regarded as research, though under some circumstances it might become such.

4. *Investigative studies.*—Investigative studies are service studies typically made by a department which devotes its time to special fact-finding work. For example, the administration may feel that there is a weakness at some point in the operations of the plant and may assign a specialist or a department of specialists to locate the trouble, describe it, analyze it, and suggest improvements. Administrators and supervisors, of course, adjust many problems in the normal routine of their work, but a problem requiring the gathering of technical data becomes the responsibility of the research staff. Investigative studies are of large importance in maintaining or improving efficiency and morale in any organization. Their field is the entire program of operations. They vary greatly in complexity, but they are not routine and may ordinarily be classed as research.

5. *Exploratory studies.*—Exploratory studies are charged with the responsibility of discovery. They are concerned with the possibilities of doing something better or of doing the same thing in a better way. They seek new materials, new methods, new products, and new markets for products. They are experimental, inventive, creative. In any organization which seeks to achieve the maximum of its potential service, such studies are vital, for they develop new insights and offer the means of continual adaptation to changing conditions. They are an important type of research.

6. *Basic research studies.*—These studies comprise the field of pure research. They are made in part by national research agencies, in

part by university departments, but also by each large organization. They are naturally exploratory and experimental, but they deal with the more fundamental and the less immediate aspects of problems. They result not only in a new method of doing things but in a new generalization which may become the basis of a large number of new ways of doing things. The findings represent something of a contribution to science at large as well as to the industry which sponsors the research.

PROVISION FOR FACT-FINDING

Attention is now turned to the third question raised at the opening of the discussion.

The first three types of fact-finding which were named—accounting, checking, and reporting—are either routine or periodical. The principal question for any school system is whether the various needs of the organization, as outlined in the first part of this article, have been carefully considered and provided for. Financial accounting, checking, and reporting are usually prescribed by law. Accounting, checking, and reporting on pupil attendance are likewise prescribed, but the appropriate measurement of pupils is optional and may not be adequately provided for. The accounting for teachers, the distribution of their time, the accounting for equipment, the testing of commodities purchased, the proper summarization of the various facts that accumulate, and the preparation of significant reports—these functions may not have received definite consideration.

It is in the other three types of fact-finding, however, that chief interest centers, namely, the investigative, the exploratory, and the basic research studies, which were designated as research. The earlier sections of this article have called attention to the importance of these activities in both industry and education. There are some persons, however, who would question the appropriateness of these functions for public education. They would agree that the routine accounting should be performed but would fail to provide for the larger studies that contribute to the orientation of the whole educational program. These latter studies are too expensive, they might say, or the settlement of such problems should be left to universities.

The answer to such a position is found in the first part of this article. Research is accorded abundant support by progressive in-

dustries. It is regarded as essential to a high degree of efficiency. Research flourishes where competition is at its highest, where every dollar of expenditure is scrutinized to see that it is giving returns. Research is wanting only in institutions not in a highly competitive field—institutions which do not have to improve. They may be doing the same thing, in about the same way, as they did thirty years ago, not keeping pace with the vast changes that have been taking place around them. Research is associated with progress, with adaptations, with leadership.

With regard to the notion that research should be left to universities, industrial experience may again be drawn on for important conclusions. Has industry left research to the universities? Are there not more university laboratories of physics and chemistry than there are university schools of education? Are there not many more years of scholarship and tradition behind research in the physical sciences than behind research in education? Will not the findings of university laboratories transfer more readily to the laboratories of industry than the findings of university experimenters in education will transfer to field conditions in education? Yet industry has built vast research laboratories of its own. Public schools, like industry, will continue to utilize whatever research the universities make available, but universities have their own interests and programs and cannot assume responsibilities for the continuous research needs of public-school systems. Public education is under the same obligations as is industry to provide for its own research, if it would properly serve the present-day civilization. "If the schools are to improve their products—boys and girls—they must carry on . . . . a continuous program of research. Each city school system needs to do this not only because of its general obligation to society but also because each school system is individual and requires adaptations from the general principles of school procedure."[1]

One further principle may be drawn from industry: research is not a single, unitary service but is differentiated as to kinds and as to fields of application. Accordingly, industrial concerns of any size

[1] *Survey Report of the Cincinnati Public Schools, Made by the United States Office of Education*, p. 344. Cincinnati Bureau of Governmental Research, Report No. 64. Cincinnati, Ohio: Cincinnati Bureau of Governmental Research, 1935.

are likely to maintain not one research staff, but a number of them, each being located within the department which will immediately utilize its findings.

To take a local illustration, in Cincinnati the Procter and Gamble Company maintains a research staff of about a hundred chemists for its production work, but it does not stop with chemical research. It has four research organizations dealing with personnel problems—the selection and promotion of laborers and junior executives, the selection of sales personnel, the study of labor conditions throughout the country, and the study of fatigue in workers. There are three other research organizations, dealing, respectively, with market research, packaging research, and economic research. In this company the research function is divided among eight different departments.

In General Motors Corporation research is even more widely dispersed.[1] In addition to the eleven-story research laboratory in Detroit, each manufacturing organization, such as Chevrolet, Pontiac, and Buick, carries on its own research activities in its own research laboratories. Further, each of the subsidiary organizations that manufacture parts, such as the Fisher Body Corporation or the Delco-Remy Division, maintains its research laboratories. General Motors also branches out into all the other fields of research, having, for example, a particularly well-known Customer Research Department.

The research programs of the General Electric Company, the General Foods Corporation, the E. I. du Pont de Nemours and Company, and other large corporations also involve many different fields of research, with a separate research organization for each different field.

Before accepting the inference for education, one might be tempted to say that a public-school system is not so complex as an industrial enterprise. One should not be led astray by such a thought. There is probably no undertaking more complex than public education. It deals with no carefully selected raw materials, no routine use of tools, no narrow field of concern, no standardized final product. It has all the different phases that a large industry has, and

[1] Arthur Pound, *The Turning Wheel* (especially chap. xix, "Research: The March of the Open Mind"). Garden City, New York: Doubleday, Doran & Co., Inc., 1934.

it needs the same type of factual information, at the same points, that industry does.

It may be concluded, therefore, that research in public education should be greatly expanded. As gauged by the standards of industry, a single research bureau in a large public-school system marks an embryonic stage of development. Investigative, exploratory, and basic research studies in such divergent fields as teacher personnel, housing, supplies, pupil measurement, methods of instruction, curriculum, finance, and general administration, cannot be carried on to advantage by a single research organization.[1]

If research provisions which would be proper for a large school system cannot at once be established, the adequate provision of personnel and funds for conducting needed studies in the various phases of public education can be accepted as a goal and some steps in that direction can be taken immediately. It should be borne in mind, however, that whatever is done at this time to expand the services of a single research bureau is not to be regarded as meeting the ultimate needs; the schools should move as rapidly as possible toward the placing of research service in each of the major areas of public education. Until that has been done, workers in public education cannot make the claim that they are as efficient in their productive activities as is industry nor that they are seriously trying to be.

[1] Schiller Scroggs, after an exhaustive analysis, comes to the same conclusion with reference to administrative research bureaus for universities. He states: "It is unlikely that the range and variety of information that is needed in the administration of higher education is efficiently manageable within the scope of a single phase." —"Systematic Fact-finding and Research in the Administration of Higher Education," p. 52. Unpublished Doctor's thesis, Yale University, 1935.

WHAT SORT OF PERSON SHOULD A BEGINNING TEACHER BE?

ROSCOE PULLIAM
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The first thing that is necessary in all good teaching is to decide, as nearly as possible, exactly what the teacher is trying to get the student to do or to be. Much confusion and difference of opinion in education grow out of the fact that legitimate aims for education may be stated in many different terms.

For example, such immediate aims as the knowledge of the multiplication tables, the ability to spell the two thousand words most commonly used, or the ability to read a newspaper are clearly legitimate and desirable outcomes of learning. At the other extreme on a scale ranging from concreteness to generality and from specific detail to broad principle, general approval is given to such aims as satisfactory enjoyment of leisure time, good health, good citizenship, and happy personal relationships. Hence, any statement of objectives for education is likely to cover only that part of the picture clearly observable from the point of view that the observer happens to assume.

In the following paragraphs an effort is made to state concretely, from a certain point of view, some of the long-range, general objectives that should be sought in the education of teachers. The objectives are stated in the form of test questions. The favorable answer to each question is presumed to be "yes."

It will be noted that the questions do not deal primarily with character, personality, and teaching technique—factors that, while very important, are relatively common among young people who have been trained to teach. The questions deal rather with matters of general education; with the fundamental facts about the world in which we live; and with the basic skills, habits, and attitudes that are necessary for intelligent citizenship and satisfactory adjustment

to our complicated modern civilization. While there is room for improvement in the matter of technical training, it has been the writer's experience that by far the most serious weaknesses of the average teacher are weaknesses in fundamental education.

If there is anyone who doubts the necessity for including such items as a reasonable facility in silent reading, the ability to spell or to write a paragraph without making an unreasonable number of errors in punctuation and grammar, because it may be assumed that all teachers can do these fundamental things, most assuredly that person has never read stacks of applications for positions nor taught in a summer school for teachers.

The list of questions to be asked about the prospective teacher follows.

A. Does the prospective teacher know how to work?
   1. Does he have enough self-control to hold himself to his work in spite of social distractions?
   2. Is he regular and punctual in his attendance at his work?
   3. Does he have independent initiative that leads him to do some work beyond what is required of him for credit or for pay?
   4. Does he know how to go about getting information about a problem of teaching technique, or in the subject he teaches by using:
      a) The library card index?
      b) Bibliographies in textbooks?
      c) *Readers' Guide to Periodical Literature*, *International Index to Periodicals*, and *Education Index?*
      d) Other tools suitable to his field?

B. Has he mastered the fundamental tools of education?
   1. Is his reading ability better than the upper quartile for Grade VIII on a good standardized silent-reading test?
   2. Can he speak clearly and effectively and with a degree of correctness that would be acceptable among well-educated people?
   3. When he writes, does he *habitually* use complete sentences, divide his material into paragraphs, punctuate correctly, and avoid the most obvious faults in diction?
   4. Can he spell?
   5. Can he make a score equal to the eighth-grade upper quartile in a good standardized arithmetic test in both computation and reasoning?
   6. Does he possess the common fund of literary, historical, and geographical knowledge necessary to intelligent understanding of what he reads and hears?

C. Does he have scholarship in his own field[1] and in related fields fundamental to his own?
   1. Does he know the names and the general character of the outstanding periodicals that cover his field?
   2. Given access to a library, a shop, or a laboratory, can he produce, within a reasonable length of time and without help, a respectable analysis and a tentative solution of a small problem in his field?
   3. Does he understand how his field of study is related to other subjects and to the whole body of human knowledge? In other words, has he avoided the loss of perspective that sometimes comes from overspecialization?

D. Does he appear to have the personal qualities necessary to success in teaching?
   1. Something above average intelligence?
   2. Common sense enough not to be considered irresponsible, erratic, or queer by his associates or teachers?
   3. A fair degree of facility in speech?
   4. The capacity for making young people respect him without disliking him?
   5. The capacity to comprehend the difficulties of his pupils and resourcefulness in planning learning activities for them?
   6. Good health, mental and physical?

   (An individual who lacks some personal qualities that are obviously necessary in teaching should be frankly discouraged from taking training for teaching.)

E. Does he have scholarly interests?
   1. Does he respect learning and despise quackery?
   2. Has he formed substantial general reading habits?
      a) Does he know and regularly read some of the good magazines (*Harper's Magazine*, *Atlantic Monthly*, *Scribner's Magazine*, *Nation*, *New Republic*, and *Yale Review*)?
      b) Does he occasionally read a worth-while current book?
   3. Does he show a decided tendency to continue learning after he leaves school?

F. Does he have a sense of social responsibility?
   1. Is he interested enough in local, state, and national politics to be an informed voter?
   2. Does he have enough regard for the welfare of all people to be interested in immediate social problems that involve the general welfare?
   3. Will he do voluntary work for, or contribute money to, genuine social-welfare causes in which he is interested?

G. Does he have an open mind?
   1. Does he suspect and oppose all efforts and proposals to restrict the free-

[1] The special field of the elementary teacher is elementary education. In the high school it may be any special subject plus secondary education.

dom of thought and of speech of any person, however wrong the person may appear to be?

2. Will he willingly and sincerely submit his dearest wishes and his most cherished beliefs to critical question and examination?
3. Is he ready to accept new facts that appear to be relevant to a problem in which he is interested, regardless of how much they disturb his previous beliefs?

If these questions do concern some of the fundamentally important qualities and abilities that a teacher should have, then it follows that the school which undertakes to educate teachers ought to set about the task of developing those qualities and abilities, with a minimum waste of effort on other matters that are not obviously involved. That part of the teachers'-college curriculum devoted to general rather than professional education might well be measured by some such standards as these, both in what it includes and in what it does not include.

It is possible that in their recent efforts to conform to the standards set by the accrediting associations of the liberal-arts colleges, the teachers' colleges may now actually be farther away from doing their work directly and sensibly than they were a generation ago.

THE AUTHORITY TO ISSUE TEACHERS' CERTIFICATES IN THE UNITED STATES

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The number of officials authorized to issue teachers' certificates has gradually diminished as education has progressed in the United States. The concentration of authority moved, in general, from numerous local officials of towns to county superintendents and then to the state departments of education. The centralization of authority is shown in this report by (1) the results of a recent investigation by the writer of the state organizations which issue teachers' certificates and a comparison of these results with previous investigations and (2) several summary statements apparently characteristic of the development in all the states, which were gleaned from a review of studies of the history of certification in several states.

CURRENT PRACTICES OF STATE ORGANIZATIONS WHICH ISSUE TEACHERS' CERTIFICATES

The study of the present practices of state organizations which issue teachers' certificates was made by addressing a letter of inquiry to the proper authority in each state. Replies were received from all forty-eight states.

Table 1 shows the state organizations which were issuing teachers' certificates at the time this study was made (1937). An exact tabulation of the various organizations used by the states is difficult because of slight variations in the procedures among states which follow, in general, the same organization of certification. Some of the classifications used in Table 1 are similar to those used by Cook.[1] These were used in order that the findings of this study might be compared with the earlier studies made by that author. Explanations of the classifications used in Table 1 follow: (1) state or-

[1] Katherine M. Cook, *State Laws and Regulations Governing Teachers' Certificates*, p. 5. United States Bureau of Education Bulletin No. 19, 1927.

TABLE 1

TYPES OF STATE ORGANIZATIONS ISSUING TEACHERS' CERTIFICATES IN 1937

States	State	State-Controlled	Semi-state	State and County	State and Local	State, County, and Teachers' College	State and Teachers' College
Alabama	×						
Arizona	×						
Arkansas			×				
California				×			
Colorado							×
Connecticut	×						
Delaware	×						
Florida	×						
Georgia				×			
Idaho						×	
Illinois		×					
Indiana	×						
Iowa	×						
Kansas							×
Kentucky	×						
Louisiana	×						
Maine	×						
Maryland	×						
Massachusetts					×		
Michigan	×						
Minnesota	×						
Mississippi			×				
Missouri						×	
Montana	×						
Nebraska	×						
Nevada	×						
New Hampshire	×						
New Jersey	×						
New Mexico	×						
New York	×						
North Carolina	×						
North Dakota	×						
Ohio	×						
Oklahoma	×						
Oregon	×						
Pennsylvania	×						
Rhode Island	×						
South Carolina	×						
South Dakota	×						
Tennessee	×						
Texas	×						
Utah	×						
Vermont	×						
Virginia	×						
Washington							×
West Virginia	×						
Wisconsin				×			
Wyoming	×						

ganization, in which all certificates are issued by state authorities and the state retains control over the whole matter of teacher certification; (2) state-controlled organization, in which state and county authorities may issue certificates but the authority governing the issue (including giving questions and examining papers) is retained by the state officials; (3) semi-state organization, in which the state exercises some authority but not complete control (the state department makes the regulations and sets the questions for examination, but county authorities examine the papers and issue certificates); (4) state and county organization, in which both state and county authorities issue some certificates and govern all or important regulations, formulating questions, for example, under which certificates are granted; (5) state and local organization, as in Massachusetts, in which full power of certification is given to the township school committees, the state department issuing certificates limited in number and type; (6) state, county, and teachers' college organization, in which all three—the state, county, and teachers' college authorities—issue certificates; (7) state and teachers' college organization, in which both state and teachers' college authorities issue certificates.

Thirty-six states now use the state organization for granting teachers' certificates. Illinois is the only state which is classified, at present, under the state-controlled organization. In Illinois, except in Cook County and the city of Chicago, the applicant must submit a transcript of his college credits to the Illinois State Examining Board for Teachers' Certificates on the institutional credit blank supplied by that office. After the transcript is approved, he must make application for a certificate through his county superintendent of schools. The county superintendent then requests the State Examining Board to issue the certificate, which is sent directly to the county superintendent. The following section of the law allows the separate organization which issues certificates in the county of Cook and the city of Chicago:

> No one shall be authorized or employed to teach in the common schools of the state or shall receive for teaching any part of any public-school fund who is not of good character, at least eighteen years of age, and who does not, at any time he enters upon his duties, hold a certificate of qualification covering the

period of his employment and granted by the superintendent of public instruction, by the state examining board, and a county superintendent as hereinafter provided, or, by the board of education of a city having a population exceeding 200,000 inhabitants: *Provided, however*, that the provisions of this act relating to limited state certificates shall not apply to counties having a population exceeding 500,000 inhabitants.[1]

PAST AND PRESENT ADMINISTRATIVE ORGANIZATIONS ISSUING TEACHERS' CERTIFICATES

The states have, from time to time, changed their administrative organizations which issue teachers' certificates. Table 2 shows the number of states with the several types of organizations in effect in 1898, 1903, 1911, 1921, 1926, and 1937. The data contained in this table prior to 1937 are according to Cook. Mrs. Cook's study of 1926 included Georgia and Washington among the states having the state-wide organization, but Table 1 gives these two states different classifications. Either these states have changed their organizations since 1926, or there is a difference in the interpretation of the information supplied by these states. Mrs. Cook used five classifications, whereas the writer used seven. Therefore, the number of states with the state-wide plan remains the same in 1937 as in 1926, since Ohio and Oklahoma have changed to this plan.

The data in Table 2 show the concentration of authority to issue teachers' certificates. All the states have organizations which show some degree of centralization of authority. The most centralized control of certification is the state organization, which steadily increased in popularity across the years to 1926.

The history of the changes in the organizations used in the states discloses the evolution toward centralized authority. A review of the history of teachers' certification in a few states presents facts typical of the changes in authority which occurred throughout the United States. The following quotations illustrate this point.

From the earliest Colonial times it has been customary to examine the prospective school teacher in order to determine whether or not she possessed the requisite moral and scholastic qualifications. For many years the examination and certification of teachers was strictly a lay function. . . . .

[1] *The School Law of Illinois*, p. 171. Prepared by G. A. Reynolds. Circular No. 284. Springfield, Illinois: John A. Wieland, Superintendent of Public Instruction, 1935.

For thirty years, or from 1837 to 1867, the certification of teachers in Michigan rested largely in the hands of the local township school inspectors.[1]

For fifteen years following the first act providing for the certification of teachers, all authority was vested in county agencies. . . . .

Each county agency was an entity to himself, preparing his own questions for the examination of teachers.[2]

TABLE 2

TYPES OF STATE ORGANIZATIONS ISSUING TEACHERS' CERTIFICATES AT SEVERAL PERIODS BETWEEN 1898 AND 1937

Type of Organization	Number of States*					
	1898†	1903†	1911†	1921†	1926†	1937
State	3	§	15	26	36‡	36
State-controlled	1	§	2	7	4	1
Semi-state	17	§	18	10	5	2
State and county	18	§	7	3	2	3‖
State and local	.....	.....	.....	2	1	1
State, county, and teachers' college¶	.....	.....	.....	.....	.....	2**
State and teachers' college¶	.....	.....	.....	.....	.....	3††

* Temporary and emergency certificates and permits are not included.

† These data are taken from: Katherine M. Cook, *State Laws and Regulations Governing Teachers' Certificates*, p. 19. United States Bureau of Education Bulletin No. 19, 1927.

‡ Two states under this organization are differently classified in 1937.

§ No data.

‖ Includes Georgia, which in 1926 was classified under the state organization.

¶ Organizations which have been added in the 1937 study and therefore have changed the classifications of five states.

** Includes Idaho and Missouri, which in 1926 were classified under the state-controlled organization.

†† The following three states were differently classified in the 1926 study: Colorado, state-controlled organization; Kansas, semi-state organization; and Washington, state organization.

The steps in the evolution of the certification of teachers are shown in the summary made by Hutchison:

(1) Furnishing uniform examination questions by the state, the papers, however, being graded by the school examiners in the various counties; (2) permitting examination papers written in one county to be forwarded to another county for grading; (3) forwarding examination papers to the state superin-

[1] Llewellyn George Hutchison, "The History of the Certification of Teachers in Michigan," pp. 1, 5. Unpublished Master's thesis, Department of Education, University of Chicago, 1922.

[2] Lewis Daniel Hansbrough, "The History of the Certification of Teachers in Arkansas," p. 100. Unpublished Master's thesis, Department of Education, University of Chicago, 1933.

tendent for indorsement thus giving the resulting certificates wider validity; (4) general intercounty recognition of teachers' certificates; (5) the increasing importance of a co-ordinate system of state certification and the issuing of certificates of wider validity; (6) the recognition of normal-school and university diplomas and certificates; and (7) the growing force of a professionally trained body of teachers possessing higher grades of certificates of wider validity.[1]

Placing the responsibility for issuing teachers' certificates in the hands of the state board of education reflects the present level of development in the concentration of this type of authority:

A more curtailing act could not have been passed than the one of 1931, abolishing the eighty-three certificating agencies and placing all certificating authority in the hands of the state board of education.[2]

EFFECTS ON THE TEACHING PROFESSION OF CENTRALIZATION OF AUTHORITY TO ISSUE TEACHERS' CERTIFICATES

The centralization of authority to issue teachers' certificates is associated with the growth and the importance which the profession of teaching has attained in the United States. Some of the aspects of this association clearly indicate the result of the concentration of authority on the growth of the profession. In others the relation of cause and effect are difficult to determine. The following aspects of the association of the concentration of authority and the advancement of the profession will be discussed: (1) the transfer of authority to issue teachers' certificates from laymen to professionally trained officials, (2) the change from the use of examinations to the acceptance of proper credentials as the basis on which to issue teachers' certificates, (3) the extending of the length of time during which teachers' certificates are valid, (4) the advancement and the unification of requirements for obtaining teachers' certificates.

1. *The transfer of authority to issue teachers' certificates from laymen to professionally trained officials.*—Frequently the stimulation for concentrating the authority of teacher certification came from teachers who desired a higher grade of certificate than was issued by local authorities and who hoped for a professional evaluation of teachers seeking a position. The local authorities were laymen or small salaried officials having interests in fields other than education, and in

[1] Llewellyn George Hutchison, *op. cit.*, p. 34.

[2] Lewis Daniel Hansbrough, *op. cit.*, p. 101.

many instances they were politicians who permitted party affiliations to influence their judgments of candidates for certificates.

The standards employed by more seriously minded authorities for evaluating the preparation of teachers varied. However, as the authority to certificate was transferred from local officials to authorities having jurisdiction over more extensive geographical areas, it became evident that there was an increased tendency to approve the better-prepared persons. As time went on, the state-wide organization gave such significance to the responsibilities of teachers' certification that this function required professionally trained persons. Although some of these offices are filled, at present, by political appointees, the position is of sufficient importance to be attractive to professionally trained persons. On a long-term basis the interest manifested by educators will determine the types of persons who are selected for these positions.

2. *The change from the use of examinations to the acceptance of proper credentials as the basis on which to issue teachers' certificates.*—The basis for evaluating a teacher's ability was, first, personal interview or personal acquaintance; second, the results from oral and written examinations composed by local and later by state authorities; and, finally, the character of credentials. The authorization of colleges and normal schools to issue certificates reflected the respect paid to such institutions and brought about the acceptance of credentials for their graduates. Whether local authorities would have come to accept credentials had there been a sufficiently large number of college graduates desiring teaching positions at the time when local officials were in charge of certification can merely be conjectured. The only certain fact is that the change in the basis of evaluating candidates desiring certificates evolved with the years as did the centralization of authority.

3. *The extending of the length of time during which teachers' certificates are valid.*—The certificates issued by local authorities were usually issued for no longer than one year. The long-term certificate was instituted by officials whose jurisdiction extended over larger geographical areas. No local official would have assumed such responsibility. To what extent the practice of issuing life-certificates is an indication of professional advancement is a debatable subject.

The authority to issue life-certificates and the acceptance of credentials rather than the use of examinations have become increasingly popular in recent years.

4. *The advancement and the unification of requirements for obtaining teachers' certificates.*—The state requirements for obtaining teachers' certificates have gradually increased with time. Many of the earlier requirements were no more specifically stated than that the candidate must possess "education and a good moral character." The interpretation of what these items meant was left to a large number of public and semipublic local authorities. The changes which have taken place in the requirements may be accounted for in part by public enlightenment and in part by the transfer of certificating authority from laymen to officials possessing professional training.

A review of requirements for obtaining teachers' certificates in the various states[1] discloses, as yet, no definite uniformity of requirements. However, there is probably greater uniformity than there was when local authorities examined candidates. During each of the past several years the writer has summarized the statements of state requirements and, in so doing, has observed an increasing uniformity among the states. There must, however, be much more similarity in the statements of requirements before it can be said that the authorities of the several states are approaching a common understanding of the training which should be possessed by candidates for teachers' certificates. The difference in the statements of requirements issued by the states is frequently a variation in nomenclature rather than a real difference in the fundamental preparation required of applicants for certification.

The requirements for obtaining teachers' certificates are sufficiently high at present to discourage the practice of filling a teaching position while preparing for entrance into some other profession. In the past, teaching was used as a kind of interim vocation, but today young people must enter this vocational pursuit with seriousness of purpose because the training required for a teaching certificate includes both academic and professional preparation.

[1] Robert C. Woellner and M. Aurilla Wood, *Requirements for Teaching Certificates*. Chicago: University of Chicago Press, 1938 (revised).

THE CHILD AND DRAMATICS

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The dramatic instinct is a creative instinct, which releases the imagination into new worlds. Creative dramatics, therefore, is one of the most potent forces in education for the child, and story-playing is the most elementary form of creative dramatics. Its efficacy lies not alone in its possibilities of development but also in its value as a key to the child mind. The question will arise why children should not have a finished production, conceived by the poetic mind of an artist, rather than the crude expression of their own creation. True, the former may give to them a higher conception of art, but it offers neither the same possibilities of unfoldment nor the opportunities of research. As educators, we are not concerned with making actors; we are interested in the application to dramatics of the creative imagination.

To create is to build, to bring to life, or to construct a form. The form in this case will be a play which will have a climax, a plot, suspense, and characterization. The lines, however, will be spontaneous; they will be the result of various forces. In a play with set lines, in contrast with the creative play, response will be limited by the fact that the characters are already molded by the author and the director. The child will put on the interpretation as he might a mask, and, however excellent his delineation, it does not grow out of him. In creative play he builds his portrait from within by imaginative participation in the life of the character. The director guides that portrayal so that it is consistent with the plot of the story; otherwise he is silent.

Creative imagination means the ability to project one's self into new situations, whether of a mental or a physical nature. It is a spiritual attribute essential to the happiness and the success of every human being. The story-play presents to the child a new environment. The creative play is not done by imitation but aims to en-

courage free action and feeling on the part of the child through suggestion and stimulation. He becomes a new entity, a composite of new qualities and characteristics.

One of the distinctions between the superimposed play and the creative play lies in the subject matter. The adult conceives in his mind the artistic image of the production as a whole. He includes in this mental picture such items as scenery, costumes, action, and gestures. The actions and the gestures may be graceful and charming in themselves but, when used by the children, become artificial. A gesture which may in itself be graceful may not be expressive of the emotion of the child and may be quite foreign to the particular child using it. If the child is made to feel the genuine emotion and is allowed to express it as he feels it, a pleasing result will be obtained. Moreover, one method sets up inhibitions while the other tends to free the personality.

The director in story-playing acts as leader. It is his delightful task to guide the imaginative play so as to stimulate, and yet not impose his will. He must constantly have in mind the fact that the final production must have a plot or story, that it must possess climax, suspense, and characterization. Extraneous and irrelevant matter must be put aside, and the children, by means of discussion, must be brought to understand the reason for discarding it. Dialogue which portrays the characters of the play must be developed. A sense of dramatic structure must be developed in the children, which, after several creative efforts, will result in delightful plays no matter how crude the first effort.

The first step of the director will probably be to tell to the children several stories with value both as literature and as dramatic action. The children should be permitted to choose the story that appeals to them. The next step is to permit them to story-play this selection as they spontaneously desire, without suggestions from the supervisor. Some interesting observations will be the result, one of which will be that the children will act out the story in detail with no regard for form.

An experiment, carried out by the writer in Chicago, brought out some interesting facts. For the purposes of comparison, a group of seven- and eight-year-old children from a day nursery at Hull

House and a group from a church of a select neighborhood were chosen. The procedure in both groups was the same and included a weekly rehearsal over a period of three months. At the end of that time a play, "Snow White and the Seven Dwarfs," was presented by each group, and the exact wording was recorded. The purpose of this experiment was to ascertain to what extent the differences in the types of personalities and environments would affect the material in both rehearsals and play and to observe the natural creative effort of children in a dramatic field.

It was discovered that certain fundamental characteristics were common to both groups. For example, in the early phases of rehearsals, which might be called the pure story-play, through the development period both groups adhered to the use of excessive detail. Incongruous material, resulting from the imagination's going off on a tangent, did not disturb the children at all; horseplay and a broad comedy sense predominated from the first rehearsal. These characteristics appeared again in the final performance.

Structure, climax, and plot were affected by (1) the interplay of personalities within the group; (2) the previous experiences of the children; (3) the use of foreign material, such as other fairy lore and the movies; and (4) a sense of humor. How these factors were related to the development of rehearsal material and the resulting difference in the plays will be explained.

The early rehearsals consisted in permitting the children to act out the story exactly as they felt it. At each rehearsal the cast was changed in order that the greatest amount of freedom might be created and in order that the investigator might determine how much spontaneous variety there was in the matter of original interpretation. After several weeks of "playing out" the story, an outline was discussed by the children and the director. It was decided that certain fundamentals must be in a play; these include the most "exciting" moment in the play and other less exciting events which lead up to the climax. Suspense, we determined, is the matter selected to explain how the climax comes about. This material must be interesting. Characterization was sustained by giving a trait to each child, such as curiosity, harshness, kindness, pride, and goodness. Dialogue, or our conversation, must be consistent with these

traits. The curious dwarf investigated rumors about Snow White and interviewed the huntsman; the proud dwarf boasted of his bags of gold; and so on. The group was now ready to carry on the rehearsals according to the outline.

Let us now revert to the discussion of the effect on the dramatic structure of the interplay of personalities, experience, foreign material, and humor.

The interplay of personality is more than dramatic response, and it weaves the group together so that no particular individual builds the play. Any group that creates an idea which is not A's idea nor B's nor C's but which is a new idea—a composite of all—is an integrating group. Thus it is in creative story-playing. The queen gives her individual interpretation, which is the product of her personality. The response from Snow White will be a dramatic response. That dramatic response will be determined by the temperament of the child in question. That is, the queen may give an interpretation of an arrogant queen, which will arouse in Snow White a certain reaction toward the queen. This reaction will be tempered by Snow White's natural mode of feeling. Anger may be expressed through rigidity, force, or bodily activity. How Snow White responds will, in turn, determine the instinctive answer of the queen. Thus, each member of the cast is modified by the interplay of personality. In this study this interplay resulted in a variation of rehearsal matter within the two groups and affected the content of the plays.

The experience of the children entered into the play in a most fascinating manner. The fact that the settlement-group children, living under sordid conditions, were richer in imaginative grasp is worthy of consideration. Individually and collectively they were more completely immersed in the illusions. Whether this reaction may be laid to the fact that their lives were less devitalized by artificial entertainments, it is impossible to state. The fact remains that not only the rehearsals but also the final performance showed greater originality in the case of the less favored group—in spite of the inferior mental status of the participants. Again, they were, reputedly, hard to discipline, but from the time their interest was ignited, discipline was no problem whatever. On the other hand, in the church group discipline remained a problem to the end.

The children, with delightful inconsequence, brought into the play their personal experience regardless of its alliance to fairy lore. The settlement children interpreted the disguised beggar queen as a typical Italian street peddler. One quaint little touch was given in the suggestion by one of the dwarfs that a fortune-teller should be consulted as to the fate of Snow White. The swarthy gypsy folk in vivid attire and with brass earrings, who during the winter live in hovels on Halsted Street, were a source of delight to these children. The dwarfs also searched the "newspapers" for comments on Snow White and the queen. The church group, on the other hand, had many difficulties in retaining the servants. The subject of wages was a bone of contention, and illuminating side lights were thrown on family discussions and attitudes. The wedding of the prince and Snow White suggested a fashionable affair of the screen artists, while that of the settlement children was dignified and filled with quaint folk suggestions.

During the unfoldment of a play, dialogue is expanded by encouraging the children to converse as freely and as naturally as if they were living the play. The play is affected, then, by the emotional qualities and the mental equipment of the children. It is the portion of the director not only to free the latent potentialities in a child but also to inspire him with a true sense of dramatics in a play or in life.

Foreign material was brought into the play by both groups. This material was often drawn from other fairy stories, but modern experiences, irrelevant to fairy lore but applicable to the situation, were also used liberally.

Humor in both groups may be classified as broad comedy, often degenerating into the crudest horseplay. The fact that this tendency constituted the greatest disciplinary problem aroused the interest of the director to a special study of child humor. It is probably correct to assume that humor is a rudimentary instinct in all persons. This instinctive humor may remain crude, or it may, by means of education, become refined and elevated to such a point that it assumes the proportions of an actual philosophy. A careful observation of the elementary humor of children brought forcibly to the director's mind the certainty that in the difference between adult and child

humor lies a fertile field of misunderstanding. This fundamental difference in point of view seems to be one of the most outstanding causes of friction between child and adult. The broad and elemental humor which takes delight in crude happenings often seems to the adult a concentrated effort on the part of the child to be "naughty." This "naughtiness" the adult seeks righteously to destroy. If, however, the adult understands the source, he attempts to refine the child's humor through education. Some of the process of education may be accomplished through story-playing. Another angle of this fundamental difference between child and adult humor is that a child's remarks are often humorous to adults while the affair is not funny to the child and should not be treated humorously.

One of the most delightful aspects of the creative play is its fluid state during the process of development. The sense of illusion is intensified as the child becomes more imaginatively alive. His interest deepens as he submerges his own identity in that of the character he is portraying. The creative play delves down into the core of his personality and brings to light hidden treasures. In this study an innate sense of structure seemed to be lacking in both groups although a sense of dramatic fitness was in evidence after several weeks of creative effort. Dramatic initiative developed sufficiently to make it possible for both groups at the final performance to readjust themselves to new dramatic situations spontaneously without losing sight of the center of interest, which they maintained by making the dialogue fit the needs and carry forward the action.

The audience and its effect on the play is worthy of discussion. An adult audience too often assumes the attitude, when attending juvenile performances, of the fond parent enjoying Jane's or Tommy's dramatic display. The little ones are "cunning" or the unfortunate reverse, as the occasion may be. The experiment under consideration included a careful survey of the influence of the audience on the rehearsal material in its relation to the last performance, and an analysis of the apparent causes.

The settlement group invited a large audience of children to their "show." The only adults admitted were about a half-dozen social workers who were interested in the educational experiment and who were sympathetically attuned to the natural procedure of the chil-

dren. Audience and cast went together into that mystic realm of the great "make-believe" and together lived through the problems, the joys, and the sorrows of Snow White. The audience sat forward on their nursery chairs, almost without physical movement, awaiting each new event. Between scenes audible comments concerning the fate of Snow White were heard. The play lacked some of the originality of the rehearsals, but it did not deviate in the fundamentals.

The church group, on the other hand, had an audience including adults and children. The children, conscious of their audience, were nervous from the first, fearful that they might not succeed. They left out many of their most charming features and lost much of their originality. About a third of the way through the play they got into their stride imaginatively and were beginning to be creative when an untimely reaction of adult amusement so disconcerted them that the illusion was broken. The play became an imitation of the creative work, consciously remembered, and lost its virility. The amusement was caused by an explanation to Snow White which was not intended as comedy. To the adults it was funny, and hence it caused laughter, which in turn made the children abruptly self-conscious and brought about a sterility of the creative power. Snow White had been warned by the dwarfs, after her first encounter with the queen, to permit nobody else to enter. She disobeyed, however, with tragic results and was taken to task by the dwarfs for her conduct. "She looked kind," said Snow White. The earnest reply of the dwarf which caused the amusement was, "People look kind, Snow White, but they aren't."

Not only this experiment but others seem to prove that the audience has a definite effect on creative effort. That mysterious force which flows between audience and actor, or individual speaker, is a potent inspiration or a dire misfortune. A children's audience for a juvenile play stimulates the actors because of the sympathy of mind and imagination. An adult audience, if it is wise in its conduct, may see a children's play with enjoyment and come away thoughtful. An unwise group of adults may destroy spontaneity, leaving in its place only a desire for approbation by the individual child for his performance.

What is the value of creative story-playing to the child? As an

individual he probably becomes "susceptible" to dramatics through his participation in this crude effort. He gains something of the positive attributes, such as the power of self-expression, which may be the source of happiness. There were timid children in these plays who learned to speak with greater ease. A month was taken to bring one timid child to speak spontaneously as many as four lines. On the other hand, the more aggressive children learn that a play is a group project with a place for all. If for no other reason, these plays were successful because they gave to the group the constructive happiness which is derived from creation. The children in both groups assisted in dyeing their costumes, arranging the stage, managing the curtains—doing all the things essential to make the play a product of the group.

The creative story-play may, then, serve a threefold purpose: its value to the child through the possibilities of personal and dramatic development, its value to the adult in his study of the workings of the child mind for the purpose of true educational unfoldment, and, lastly, its importance as a subject of research in the analysis of early drama.

SELECTION OF PREPRIMERS AND PRIMERS—A VOCABULARY ANALYSIS. II

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In an earlier article[1] it was pointed out that those preprimers having highest percentages of their vocabularies in a given primer prepare most economically for the reading of that primer. It was also pointed out that the number of preprimers which should be read depends on the percentage of the vocabulary of a primer contained in each preprimer and on the degree of identity between the vocabularies of the various preprimers.

FURTHER ANALYSIS AND INTERPRETATION OF DATA

For twenty-six preprimers Table 5 presents the percentages of the vocabulary of each preprimer contained in common by every other preprimer. These percentages were obtained by dividing the number of words in common between two books by the total number of different words in the book listed at the left. The percentages of the vocabularies in common are seen to vary from 3 to 86.

The vertical columns of Table 5 serve to rank the various preprimers according to the extent to which their vocabularies are contained in the preprimer heading a column. For example, in the third column, *More Dick and Jane Stories* ranks highest since 67 per cent of its vocabulary is in *The Elson Basic Pre-primer; Sally and Billy* ranks lowest since only 10 per cent of its vocabulary is in *The Elson Basic Pre-primer*. The horizontal rows rate the preprimers listed at the left according to the extent to which their vocabularies are contained in the other preprimers. For example, the fifth row shows that no other preprimer contains more than 60 per cent of the vocabulary of *Friends at Play*, and the twentieth row shows that no other

[1] Mabel Rudisill, "Selection of Preprimers and Primers—A Vocabulary Analysis. I," *Elementary School Journal*, XXXVIII (May, 1938), 683–93.

TABLE 5

PERCENTAGE OF VOCABULARY OF EACH OF TWENTY-SIX PREPRIMERS IN COMMON WITH EVERY OTHER PREPRIMER

Preprimer	*1	2	*3	4	*5	*6	*7	*8	9	*10	*11	*12	13	14	*15	*16	*17	*18	19	20	*21	22	*23	*24	*25	26
* 1. Bob and Baby Pony	...	30	42	6	32	38	34	30	20	32	32	48	28	26	24	32	32	36	16	34	24	18	38	22	26	26
2. Boys and Girls at School	13	...	22	6	18	20	20	17	14	17	19	23	15	11	22	21	17	22	10	17	15	14	28	12	15	17
* 3. Elson Basic Pre-primer	30	36	...	12	39	52	45	38	20	36	43	86	20	20	35	52	38	46	10	30	38	20	43	19	29	38
4. Everyday Doings	6	13	15	...	17	17	15	17	9	13	10	20	9	11	17	13	13	13	7	17	13	7	15	13	9	13
* 5. Friends at Play	27	35	45	15	...	60	52	43	28	50	55	58	38	30	48	60	42	43	18	52	37	28	57	28	40	43
* 6. Frolic and Do-Funny	20	24	37	9	37	...	36	27	24	33	30	41	24	10	28	82	23	31	13	34	26	24	39	13	22	36
* 7. Here and There	22	29	40	9	40	42	...	33	35	44	37	49	29	24	27	45	27	67	21	44	36	24	45	21	33	40
* 8. Jack and Sue	30	40	52	18	52	52	52	...	38	48	50	66	44	30	36	50	34	48	22	56	34	26	56	30	34	48
9. Let Us Read	20	25	31	8	20	35	42	29	...	32	38	46	35	17	23	35	25	43	12	31	25	18	29	17	22	34
*10. Let's Play	23	29	36	10	43	46	49	34	30	...	39	49	27	29	34	49	36	44	13	41	31	19	43	20	34	34
*11. Little Friends	26	36	49	16	54	48	48	41	41	44	...	57	28	28	38	46	43	44	16	48	36	23	46	28	41	39
*12. More Dick and Jane Stories	27	30	67	13	40	45	43	38	34	38	40	...	30	22	30	45	33	40	17	39	38	25	41	24	28	34
13. My First Book	18	22	26	7	30	30	30	29	30	25	22	34	...	17	21	30	22	30	17	32	22	14	29	18	24	28
14. Nip and Tuck	24	24	33	11	33	35	35	28	20	37	31	35	24	...	35	30	33	37	15	30	24	19	39	28	22	30
*15. Nippy	23	41	45	17	55	51	40	34	28	45	43	49	30	36	...	51	36	36	17	38	30	28	53	26	25	36
*16. Playing with Pets	17	26	38	7	38	85	35	27	24	36	30	43	24	20	29	...	22	32	15	36	28	24	41	15	23	38
*17. Playmates	24	28	39	10	37	33	31	25	22	37	39	43	25	27	28	31	...	25	9	31	30	12	34	19	21	22
*18. Rides and Slides	27	33	48	10	39	45	78	36	42	46	40	52	34	30	28	45	25	...	21	43	33	22	42	25	30	36
19. Sally and Billy	6	9	10	3	9	10	13	9	6	7	8	12	10	6	7	11	5	14	...	14	13	10	14	6	9	10
20. Saturday at the Park	7	8	11	4	12	13	14	11	8	12	12	14	10	6	8	14	8	12	7	...	12	8	14	6	12	11
*21. Spot	19	27	41	11	34	39	44	27	25	34	34	52	27	20	25	41	31	34	27	47	...	22	42	22	30	41
22. The Little Book	8	14	17	3	15	20	17	11	10	11	12	19	10	9	13	20	7	13	11	17	12	...	20	10	11	13
*23. The Picnic Book	17	29	27	7	31	34	32	25	17	27	25	32	20	19	25	35	21	25	13	31	24	21	...	14	23	29
*24. Tom and Jip	31	39	36	19	47	36	44	42	31	39	47	58	39	42	39	39	36	47	19	44	39	31	44	...	44	31
*25. Tom's Trip	18	24	28	7	34	30	37	24	20	34	35	35	25	17	18	32	20	28	17	41	27	18	37	22	...	28
26. Tots and Toys	13	20	25	7	25	34	30	24	22	24	24	29	21	16	19	35	15	24	13	27	25	15	31	11	20	...

* Asterisks mark the seventeen preprimers selected for special study and the percentages for these preprimers are shown in boldface type.

preprimer contains more than 14 per cent of the vocabulary of *Saturday at the Park.*

Asterisks mark the seventeen preprimers the vocabularies of which were shown, in the first of these two articles, to be repeated in the primers in the highest percentages. The percentages of identity in the vocabularies of these seventeen books range from 13 to 86.

For the seventeen selected preprimers Table 6 gives some averages pertinent to the number needed and to the order in which they may be read most economically.

Order in which these seventeen preprimers should be read.—A comparison of the average percentages in Columns 3 and 4 of Table 6 suggests some generalizations concerning the order in which these preprimers may be read with greatest profit to the pupil.

Three preprimers are suggested as best suited for first preprimers: *Jack and Sue, Tom and Jip,* and *Nippy.* These books are suggested (1) because the high percentages of their vocabularies in other preprimers (Column 3) indicate that the reading of one of these preprimers is a definite preparation for the reading of other preprimers and (2) because their inclusion of decidedly lower percentages of the vocabularies of other preprimers (the percentages in Column 4 being lower than those in Column 3) indicates a limited vocabulary which would add little after other preprimers were read.

Five preprimers are suggested as adapted to later reading, namely, *Here and There, More Dick and Jane Stories, Playing with Pets, Frolic and Do-Funny,* and *The Picnic Book.* The later reading of these books is suggested (1) because the fact that smaller percentages of their vocabularies are contained in other preprimers means that they do not make such definite preparation for the reading of others and (2) because their inclusion of definitely higher percentages of the vocabularies of other preprimers (the percentages of Column 4 being higher than those of Column 3) indicates an extensive vocabulary which would add much after others were read.

Because of high and fairly even percentages in both Columns 3 and 4, certain preprimers are suggested as appropriate for either early or later reading. These are: *Friends at Play, The Elson Basic Pre-primer, Let's Play, Little Friends,* and *Rides and Slides.*

Because of low percentages in both Columns 3 and 4, *Spot, Bob*

and Baby Pony, *Playmates*, and *Tom's Trip* are suggested as appropriate for latest reading.

The number of preprimers to be read.—As stated earlier, adequate preparation for the reading of a primer includes the acquisition of a

TABLE 6

SUMMARY OF DATA FOR SEVENTEEN PREPRIMERS AND PRIMERS

Preprimer	Average of Percentages of Vocabulary Contained in Seventeen Primers*	Average of Percentages of Vocabulary Contained in Sixteen Other Preprimers†	Average of Percentages of Vocabularies of Sixteen Other Preprimers Contained in Preprimer†	Average of Percentages of Vocabularies of Seventeen Primers Contained in Preprimer‡	Number of Different Words in Preprimer
1	2	3	4	5	6
Jack and Sue	81	45	33	15	50
Friends at Play	80	47	41	18	60
Let's Play	76	38	39	20	70
Tom and Jip	73	42	22	10	36
Little Friends	71	43	39	16	61
Rides and Slides	70	40	39	18	67
Here and There	70	38	44	21	78
Elson Basic Pre-primer	68	42	42	18	69
Nippy	68	40	31	14	53
More Dick and Jane Stories	67	39	51	22	88
Spot	66	34	32	16	64
Playing with Pets	61	34	46	22	94
Bob and Baby Pony	61	33	24	12	50
Frolic and Do-Funny	60	33	46	22	97
Playmates	60	31	31	15	67
Tom's Trip	59	29	30	16	71
The Picnic Book	53	26	44	22	111

* Computed from percentages in Table 2.
† Computed from percentages for books marked with asterisks in Table 5.
‡ Computed from percentages in Table 3.

high percentage of its vocabulary as sight vocabulary. Columns 3 and 5 of Table 6 are a basis for estimating the percentage of the vocabulary of a primer that is added by each preprimer when a series of preprimers is read. Column 5 gives the average of the percentages of the vocabularies of seventeen primers contained in each preprimer. Because of the overlapping of the vocabularies of preprimers, these percentages, however, may not be the percentage of

primer vocabulary added by each preprimer when a series of them is read. For example, after the reading of one preprimer containing 46 per cent of the vocabulary of *Friends at Play*, the reading of *Friends at Play* could be expected to add to the development of the vocabulary of a primer 54 per cent of the percentage listed in Column 5. On the other hand, after several books are read, each containing 46 per cent of the vocabulary of *Friends at Play*, the percentage added by *Friends at Play* would be questionable. If different words occur in common among preprimers having from 40 to 50 per cent of their vocabularies in common, the total vocabulary of a given preprimer might be built up through the reading of several others. If, however, the percentage of identity between preprimer vocabularies occurs because of the repetition of the same words from book to book, one preprimer would introduce as much of the vocabulary of a given preprimer as would several preprimers combined.

Accordingly, a check was made of the extent to which the same words occur in the various preprimers. Three words were found in all seventeen preprimers, fifteen words were found in at least thirteen of them, and thirty-nine words were found in at least nine of them. When these numbers are compared with the number of different words in each preprimer, it appears that these words occurring repeatedly in the various books constitute a large proportion of the words in common among them.

Hence, even when a series of books is read, each would contribute as new vocabulary a large proportion of the percentage obtained by subtracting its percentage in Column 3 from 100 per cent. Roughly, when read in a series, each might be expected to add from one-third to two-thirds of the percentage of primer vocabulary listed in Column 5. This proportion would vary with the percentage of words in common between preprimers. In any case, each preprimer of a group is estimated to add only a small percentage of the vocabulary of a primer, possibly from 5 per cent to 12 per cent. Consequently, a need for many preprimers is indicated.

It is to be noted that higher percentages of the vocabularies of primers appear in those preprimers listed above as suitable for later reading because of their more extensive vocabularies. These are suggested also as particularly suitable for reading by bright pupils. It is

conceivable that bright pupils could develop an adequate percentage of primer vocabulary through the reading of such a group of preprimers preceded by one or two easier books. The slower pupils would need to read through a longer series of preprimers having higher percentages of their vocabularies in common. The group of preprimers suggested above as appropriate for either early or later reading would be particularly valuable for the slower learners.

Since these generalizations drawn from Table 6 are based on averages, in particular cases reference should be made to Tables 2, 3, and 5.

Sequence for the reading of primers.—Table 7 presents the percentage of the vocabulary of each primer which is contained in each other primer. A horizontal reading of this table gives the percentage of the vocabulary of a given primer which occurs in each of the other sixteen primers. A vertical reading of the table gives the percentages of the vocabularies of the other primers which are contained in the primer heading a column. For example, the first row reveals that 40 per cent of the vocabulary of *At Home and Away* is in *At the Farm* and that 40 per cent of the vocabulary of *At Home and Away* is in *Ben and Alice*. The first column shows that 42 per cent of the vocabulary of *At the Farm* is in *At Home and Away* and that 53 per cent of the vocabulary of *Ben and Alice* is in *At Home and Away*. Reading the horizontal rows gives data on the commonness of the vocabulary used in a primer, that is, the extent to which its vocabulary occurs in other primers. Reading the vertical columns gives data on the extent to which the vocabulary of a primer includes that of other primers.

Table 8 presents (1) the average of the percentages of the vocabulary of each primer contained in the other sixteen primers and (2) the average of the percentages of the vocabularies of the other sixteen primers contained in each primer. It is seen that, on the average, high percentages of the vocabularies of *Ben and Alice*, *Jo-Boy*, and *We Play* are in the other primers. On the other hand, these books contain lower percentages of the vocabularies of the other primers. These data indicate that these three are best used as first primers because they would contribute most to the reading of other books, while the reading of other books would contribute less as preparation for them. This same relation is indicated to a smaller

TABLE 7

PERCENTAGE OF VOCABULARY OF EACH OF SEVENTEEN PRIMERS IN COMMON WITH EVERY OTHER PRIMER

Primer	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. At Home and Away	.....	40	40	44	39	44	38	45	30	41	40	39	44	49	43	47	42
2. At the Farm	42	.....	40	49	43	45	42	47	30	40	41	34	51	50	44	51	45
3. Ben and Alice	53	50	.....	60	58	62	58	58	42	54	55	53	63	67	54	62	60
4. Bob and Judy	47	50	50	.....	49	52	53	51	37	48	50	45	51	54	48	55	47
5. Day In and Day Out	41	43	47	48	.....	49	41	47	34	41	41	34	47	50	48	50	44
6. Elson Basic Primer	48	47	52	54	51	.....	51	52	38	53	50	41	52	53	50	57	52
7. Everyday Fun	36	38	42	47	37	44	.....	42	32	39	43	35	42	48	37	39	42
8. Friends	30	30	29	31	29	31	29	.....	19	27	28	23	31	36	27	32	30
9. Friends for Every Day	38	36	40	43	40	43	43	36	.....	41	43	35	40	43	45	42	37
10. Jo-Boy	55	52	56	60	60	65	56	55	44	.....	54	50	59	63	57	60	56
11. Little Friends at School	44	43	47	51	42	50	50	49	37	44	.....	44	46	43	43	51	44
12. Peter and Peggy	33	27	34	35	27	31	31	30	23	31	34	.....	35	34	32	35	33
13. Pets and Play Times	38	41	41	40	38	40	38	40	27	38	36	36	.....	46	37	43	42
14. Play Days	45	43	46	45	42	44	45	50	31	42	41	37	48	.....	43	52	48
15. Tom, Jip, and Jane	44	43	43	46	47	47	40	43	37	43	40	39	44	49	.....	48	41
16. Wag and Puff	30	30	30	32	29	32	26	31	21	28	29	26	31	36	29	.....	30
17. We Play	52	53	56	54	51	58	54	56	36	51	49	48	60	66	48	59	.....

degree for *The Elson Basic Primer*, *Bob and Judy*, and *Little Friends at School*.

On the basis of the data in Table 8, *Pets and Play Times*, *Wag and Puff*, and *Friends* are suggested for later reading. They would contribute less to the reading of other primers because of the low per-

TABLE 8

SUMMARY OF DATA ON VOCABULARIES OF SEVENTEEN PRIMERS

Primer	Average of Percentages of Vocabulary of Primer Contained in Sixteen Other Primers*	Average of Percentages of Vocabularies of Sixteen Other Primers Contained in Primer†
Ben and Alice	57	43
Jo-Boy	56	41
We Play	53	43
Elson Basic Primer	50	46
Bob and Judy	49	46
Little Friends at School	46	42
Day In and Day Out	44	43
Play Days	44	49
Tom, Jip, and Jane	43	43
At the Farm	43	42
At Home and Away	42	42
Everyday Fun	40	43
Friends for Every Day	40	32
Pets and Play Times	39	47
Peter and Peggy	32	39
Wag and Puff	29	49
Friends	29	46

* Average of the percentages of the horizontal rows of Table 7.
† Average of the percentages of the vertical columns of Table 7.

centages of their vocabularies in other books. At the same time, their vocabularies are extensive, and other primers would prepare for them because they include high percentages of the vocabularies of other primers. *Peter and Peggy* is suggested for still later reading since it contains the most unusual vocabulary of the primers analyzed.

In general, the reading of a sequence of primers chosen from the upper portion of Table 8 would mean an easy transition from one primer to another, while the reading of a sequence of primers chosen

from the lower portion of Table 8 would mean a difficult transition from primer to primer. Since, however, the percentages of Table 8 are averages, in particular instances reference should be made to Table 7.

By use of Tables 7 and 8, therefore, the teacher may choose an appropriate sequence of primers for children of different abilities. The slow learner would progress best through the reading of many primers having high percentages of their vocabularies in common. The rapid learners would progress best through the reading of a sequence of primers having more varied vocabularies.

SUMMARY

From the analysis of vocabularies of preprimers and primers reported in these two articles, the following generalizations are drawn.

1. Both preprimers and primers vary widely with respect to the total number of different words contained and the number of words with fewer than four presentations. The variation in the number of different words is from 36 to 249 among the preprimers analyzed and from 200 to 429 among the primers analyzed. The variation in the number of words with fewer than four presentations is from none to 160 among the preprimers analyzed and from none to 184 among the primers analyzed.

2. There is great variation in the extent to which the vocabularies of preprimers and primers are identical. (*a*) The percentages of the vocabularies of preprimers contained in the various primers vary from 9 to 100. (*b*) The percentages of the vocabularies of primers contained in the different preprimers vary from 3 to 32. (*c*) The percentages of the vocabularies of preprimers contained in other preprimers vary from 3 to 86. (*d*) The percentages of the vocabularies of primers contained in other primers vary from 19 to 67.

3. Because of the wide variation in the extent to which the vocabularies of preprimers and primers are identical, the sequence in which these books are read is an important factor determining a child's progress in beginning reading. On the basis of the amounts of identity between the vocabularies of the various books, an appropriate sequence for the reading of these preprimers and primers by pupils of different abilities has been suggested.

SELECTED REFERENCES ON FOREIGN EDUCATION

JAMES F. ABEL
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Out of England came, during the year, several books of a kind that is almost unknown in the United States. *A Schoolmaster's Testament*, *Changing Eton*, *The City of London School*, *After Many Days*, *A Headmaster Reflects*, *The Story of the Woodard Schools*, and *Lex—Being the Biography of Alexander Devine*—all breathe a spirit of pride in the profession of education, an originality in handling difficult situations, and an appreciation of what one well-conducted school can do, that is too little in evidence in the literature on education in this country.

France contributed an important historical study of the baccalaureate of secondary education. The German publications dealt mainly with the changes made in education by the National Socialist Party. In connection with the meeting of the World Federation of Education Associations, Japan presented in the English language some well written and illustrated accounts of its schools. For the International Exposition at Paris, Argentina issued the most complete picture yet available of education in that country.

The usual yearbooks that have been included annually in these references came from the press. No new organization entered the yearbook field. Reports of important surveys were few. A compilation of data from fifty-eight countries on youth; a study of higher education in East Africa; a review of education in the colonies of French West Africa; and a comprehensive report on education in Burma are the most noteworthy. The annual, official reports appeared in about the regular number and content.

General References

294. Arsenian, Seth. *Bilingualism and Mental Development.* Teachers College Contributions to Education, No. 712. New York: Teachers College, Columbia University, 1937. Pp. vi+164

The author found that bilingualism did not influence, favorably or unfavorably, the mental development of children of ages nine through fourteen in the groups studied. Of international interest because the problem of bilingualism is so widespread.

295. BUREAU INTERNATIONAL D'ÉDUCATION. *Annuaire international de l'éducation et de l'enseignement, 1937.* Publications du Bureau International d'Éducation, No. 56. Geneva: Bureau International d'Éducation, 1937. Pp. 440.

The fifth of a series giving the principal events in education for the year. This number is for the year 1935–36 and includes data from fifty-six countries.

296. BUREAU INTERNATIONAL D'ÉDUCATION. *Documents officiels sur l'enseignement de la psychologie dans la préparation des maîtres primaires et secondaires.* Publications du Bureau International d'Éducation, No. 53. Geneva: Bureau International d'Éducation, 1937. Pp. 130.

Of the forty-two countries that furnished data on this question, forty-one have made psychology obligatory in the preparation of primary-school teachers. An unusually interesting study.

297. BUREAU INTERNATIONAL D'ÉDUCATION. *L'Enseignement des langues vivantes.* Publications du Bureau International d'Éducation, No. 54. Geneva: Bureau International d'Éducation, 1937. Pp. 246.

Compiled from data furnished by forty-nine countries. It includes such items as types of schools in which modern languages are taught; official programs; methods of instruction; nationality, training, and status of teachers; and summer courses.

298. BUREAU INTERNATIONAL D'ÉDUCATION. *L'Inspection de l'enseignement.* Publications du Bureau International d'Éducation, No. 55. Geneva: Bureau International d'Éducation, 1937. Pp. 264.

Compiled from data furnished by thirty-nine countries in response to a questionnaire.

299. CHMELAŘ, JOSEF. *National Minorities in Central Europe.* Prague: "Orbis" Printing & Publishing Co., 1937. Pp. 106.

The hard-earned rights of the national minorities in many parts of the world are about to be lost, apparently, in the policies and practices of force that are now prevailing. Seemingly no minority group can feel itself even reasonably safe from oppression.

300. *La Coordination des enseignements du second degré: Enquête internationale.* Paris: Institut International de Coopération Intellectuelle, 1938. Pp. 280.

An international study of the co-ordination of the various kinds of secondary education. Includes outlines of the organization of secondary instruction in thirty-two countries.

301. DOVER, CEDRIC. *Half-caste*. London: Martin Secker & Warburg, Ltd., 1937. Pp. 324.

A defense of racial intermixtures.

302. EFRON, ALEXANDER. *The Teaching of Physical Sciences in the Secondary Schools of the United States, France, and Soviet Russia*. Teachers College Contributions to Education, No. 725. New York: Teachers College, Columbia University, 1937. Pp. 296.

An unusually well planned and executed study. The author, with knowledge of both French and Russian, visited secondary schools in those countries in connection with his work.

303. *Health Section Report—World Federation of Education Associations, Tokyo, Japan, August, 1937*. New York: Health Section Secretariat, World Federation of Education Associations, 1938. Pp. 242.

Contains papers on health and health education in Hawaii, India, Egypt, China, Greece, Japan, France, Poland, England and Wales, Canada, and the United States.

304. INSTITUT INTERNATIONAL DE COOPÉRATION INTELLECTUELLE. *Bibliographie pédagogique internationale (année 1936)*. Paris: Institut International de Coopération Intellectuelle, 1937. Pp. 170.

The third of a series begun in 1935. The lists are from twenty-eight countries and presumably cover the more important educational publications of the year.

305. INSTITUT INTERNATIONAL DE COOPÉRATION INTELLECTUELLE. *Holiday Courses in Europe, 1938*. Paris: Institut International de Coopération Intellectuelle, 1938. Pp. 68+xvi.

This annual list, published since 1928, is given in English, French, and German.

306. *International Intellectual Co-operation, 1936*. Paris: International Institute of Intellectual Co-operation, 1937. Pp. 158.

The annual report of the institute.

307. KANDEL, I. L. (Editor). *Educational Yearbook of the International Institute of Teachers College, Columbia University, 1937*. New York: Teachers College, Columbia University, 1937. Pp. xvi+584.

The fourteenth of the series. Descriptive accounts of education in twenty-two countries.

308. MORRIS, NATHAN. *The Jewish School—An Introduction to the History of Jewish Education*. London: Eyre & Spottiswoode, 1937. Pp. xxviii+278.

A welcome volume covering a field hitherto almost untouched.

309. RAWSON, WYATT (Editor). *The Freedom We Seek—A Survey of the Social Implications of the New Education*. London: New Education Fellowship, 1937. Pp. 202.

A record of the work of the Seventh World Conference of the New Education Fellowship held at Cheltenham, England, in August, 1936.

310. USILL, HARLEY V. (General Editor). *The Year Book of Education, 1938.* London: Evans Bros., Ltd., 1938. Pp. 1024.

The seventh volume of a series begun in 1932. Section 2 of Part IV of this volume deals with the purposes of examinations in Great Britain, and twenty-three examinations are discussed. Two parts of special interest are a survey of aspects of education in India and a survey of educational problems in Europe.

311. WINSLOW, W. THACHER. *Youth: A World Problem.* Washington: Government Printing Office, 1937. Pp. xvi+138.

Compiled by the National Youth Administration from material gathered in 1935 and 1936 by the Department of State from fifty-eight countries. It attempts to answer the questions: Is there actually a youth problem? If so, how have other countries attempted to solve it? What measures have other governments taken to give young people vocational training or to alleviate youth unemployment?

BY COUNTRIES

ARGENTINA

312. *Ministerio de justicia e instrucción pública de la república Argentina en la exposición internacional de Paris del año 1937.* Buenos Aires: Talleres Gráficos de la Penitenciaría Nacional, 1937. Pp. 42.

Tables and graphs showing the progress and the present condition of education in Argentina. Compiled for use at the International Exposition of Paris in 1937.

AUSTRALIA

313. COLE, PERCIVAL R. *The Rural School in Australia.* Australian Council for Educational Research Series, No. 49. Melbourne: Melbourne University Press, 1937. Pp. 244.

An attempt at the systematic and scientific examination of rural education in Australia and a statement of the experience and theories of leading Australian educationists.

314. PORTUS, G. V. *Free, Compulsory, and Secular—A Critical Estimate of Australian Education.* University of London Institute of Education Studies and Reports, No. 11. London: Oxford University Press, 1937. Pp. 72.

Lectures delivered in London by a member of the faculty of the University of Adelaide.

315. SCOTT, ERNEST. *A History of the University of Melbourne.* Melbourne: Melbourne University Press, 1936. Pp. 226.

The University of Melbourne, founded in 1853, is among the younger of the world's universities. Its history, though not so exciting as that of many another higher institution, is nevertheless interesting.

AUSTRIA

316. BATTISTA, LUDWIG. *Die österreichische Volksschule, ihr Werden, ihre äusseren Arbeitsbedingungen und ihre Erziehungs- und Bildungsarbeit.* Vienna: Österreichischer Bundesverlag für Unterricht, Wissenschaft, und Kunst, 1937. Pp. 336.

An account in some detail of the folk schools of Austria, their purposes, curriculums, and courses of study. Pleasantly free from data on administration, costs, equipment, etc., it deals with education, not its trappings. More studies of this kind are much needed in the field of comparative education.

BRITISH COLONIES

317. EAST AFRICA. *Higher Education in East Africa.* Report of the Commission Appointed by the Secretary of State for the Colonies. London: His Majesty's Stationery Office, 1937. Pp. 136.

One of the many attempts that are being made to determine what type of education is best suited to the African.

318. HONG KONG. *Annual Report of the Director of Education for the Year 1936.* Hong Kong: Printing Department Hong Kong Prison, 1937. Pp. 40.

A direct, factual account of the progress of education in Hong Kong.

319. STRAITS SETTLEMENTS. *Annual Reports on Education in the Straits Settlements and the Federated Malay States for the Year 1936.* Singapore: Government Printing Office, 1937. Pp. 134+124.

These reports are prefaced by brief historical accounts of education in the two areas. They contain data in much detail for the year under consideration.

CANADA[1]

320. DOMINION BUREAU OF STATISTICS, EDUCATION STATISTICS BRANCH. *List of Public Secondary Schools in Canada (Academic, Technical, and Commercial).* Education Bulletin No. 7, 1937. Ottawa: Dominion Bureau of Statistics, 1937. Pp. 16.

A much-needed directory of Canadian secondary schools.

321. DOMINION BUREAU OF STATISTICS, EDUCATION STATISTICS BRANCH. *Salaries and Qualifications of Canadian Teachers, 1936.* Education Bulletin No. 1, 1937. Ottawa: Dominion Bureau of Statistics, 1937. Pp. 20.

Presents the data for six of the nine provinces of Canada.

322. DOMINION BUREAU OF STATISTICS, EDUCATION STATISTICS BRANCH. *The Use of Radios and Phonographs in Canadian Schools.* Education Bulletin No. 4, 1937. Ottawa: Dominion Bureau of Statistics, 1937. Pp. 28.

An extremely interesting survey.

[1] See also Item 109 (Blatz and Associates) in the list of selected references appearing in the March, 1938, number of the *Elementary School Journal.*

CZECHOSLOVAKIA

323. *Annuaire statistique de la République Tchécoslovaquie.* Prague: Office de Statistique de la République Tchécoslovaquie, 1937. Pp. 318.

The official statistical annual for Czechoslovakia. Contains data on education, hygiene, physical culture, sports, etc.

324. HODŽA, MILAN, and OTHERS. *National Policy in Czechoslovakia.* Prague: "Orbis" Publishing Co., 1938. Pp. 96.

A series of speeches delivered by four of the cabinet ministers. Particularly interesting because of the discussion of schools and education from the angle of nationality.

325. LEWIS, BRACKETT. *Facts about Democracy in Czechoslovakia.* Prague: American Institute in Czechoslovakia, 1937. Pp. 100.

Contains good summaries of education and culture in Czechoslovakia.

326. STUERM, FRANCIS H. *Training in Democracy—The New Schools of Czechoslovakia.* New York: Inor Publishing Co., 1938. Pp. xiv+256.

In this account of education in Czechoslovakia far too much emphasis is laid on the so-called "progressive" aspect of the schools. To the people of Czechoslovakia, not to the progressive educationists, is to be given the credit for the excellent school system of the country.

ENGLAND

327. BADLEY, JOHN H. *A Schoolmaster's Testament—Forty Years of Educational Experience.* Oxford: Basil Blackwell, 1937. Pp. xii+212.

An attempt to indicate the spirit that animated a "new school."

328. BOARD OF EDUCATION. *Recreation and Physical Fitness for Girls and Women.* Physical Training Series, No. 16. London: His Majesty's Stationery Office, 1937. Pp. 286+xii.

Designed for those who wish to take a useful share in helping girls and women, mainly working girls and women, to obtain the greatest benefit and enjoyment from their recreational physical activities.

329. BOARD OF EDUCATION. *Recreation and Physical Fitness for Youths and Men.* Physical Training Series, No. 15. London: His Majesty's Stationery Office, 1937. Pp. 286+xvi.

Written as a part of the English government's policy to further physical education. A companion volume to Item 328 in this list.

330. BYRNE, L. S. R., and CHURCHILL, E. L. *Changing Eton—A Survey of Conditions Based on the History of Eton since the Royal Commission of 1862–64.* London: Jonathan Cape, 1937. Pp. x+278.

An attempt, by men who have known the school for sixty years, to give a reasoned account of the educational developments of Eton.

331. CHESSER, ELIZABETH SLOAN. *Seven Stages of Childhood.* London: Herbert Jenkins, Ltd., 1937. Pp. 320.

Mrs. Chesser is a physician, and the book is written out of her experience as a mother and a physician for "the new generation of mothers."

332. CLARKE, F. (Editor). *A Review of Educational Thought.* London: Evans Bros., Ltd., 1937. Pp. 160.

A series of five articles, each by a different author, on current philosophies in education.

333. DOUGLAS-SMITH, A. E. *The City of London School.* Oxford: Basil Blackwell, 1937. Pp. xxviii+470.

In 1442 John Carpenter, a town clerk of London, "gave tenements to the Citye for the finding and bringing up of foure poore men's children with meate, drinke, apparell, learning at the schooles in the universities, &c., until they be preferred, and then others in their places for ever." Out of this bequest grew the City of London School, opened in 1837, about which Douglas-Smith has written clearly and entertainingly.

334. EDUCATIONAL HANDWORK ASSOCIATION. *Report of the Advisory Committee on the Provision of Facilities for Craft Teaching in Institutions Providing a General Education for Normal Children.* London: Oxford University Press, 1937. Pp. 82.

"Craft" here means an occupation demanding manual skill and primarily concerned with producing objects of utility or beauty or both. The survey covers junior, senior, and secondary schools, and excludes special and infant schools.

335. *Education in 1936—Being the Report of the Board of Education and the Statistics of Public Education for England and Wales.* London: His Majesty's Stationery Office, 1937. Pp. 200.

The annual official report. The year under consideration was of more than usual importance. The act for raising the school-leaving age from fourteen to fifteen was passed; further reorganization by the Hadow Plan was urged; the maximum limits on special places in secondary schools were removed; and proposals for physical education and recreation were presented.

336. FLETCHER, FRANK. *After Many Days—A Schoolmaster's Memories.* London: Robert Hale & Co., 1937. Pp. xii+288.

Personal reminiscences of the author's work in four of the English public schools.

337. *Higher Education in Great Britain and Ireland—A Handbook for Students from Overseas.* London: The British Council and the Universities Bureau of the British Empire, 1937. Pp. 92.

Arranged for the purpose of giving, to prospective students from overseas, particulars about admission to universities, courses of study, costs of living, fees, and facilities available at the various institutions.

338. KENDALL, GUY. *A Headmaster Reflects.* London: William Hodge & Co., Ltd., 1937. Pp. xxii+288.

A valuable and timely work—the fruit of twenty years' experience as a headmaster. Contains much pointed comment on education as it is now in England and in other countries.

339. KIRK, K. E. *The Story of the Woodard Schools.* London: Hodder & Stoughton, Ltd., 1937. Pp. 224.

The history of sixteen schools that had their beginning ninety years ago in an effort to further middle-class education.

340. LONDON COUNTY COUNCIL. *Report on Experiments in the Use of Films for Educational Purposes:* I. Sound Films in the Classroom; II. Mass Demonstrations in Local Cinemas. London: London County Council, 1937. Pp. 64.

The report on some unusually well-conducted experiments.

341. LOWNDES, G. A. N. *The Silent Social Revolution—An Account of the Expansion of Public Education in England and Wales, 1895–1935.* London: Oxford University Press, 1937. Pp. 274.

An extraordinarily interesting and well-written work.

342. MANNIN, ETHEL. *Common-Sense and the Adolescent.* London: Jarrolds Publishers, Ltd., 1937. Pp. 288.

The author writes: "What to do with our sons and daughters? For the most part the greatest service we can do them is leave them alone. Where their conduct is antisocial, in the home or out of it, and demands attention, the approach should be psychological, curative, not moralizing or punitive."

343. WHITBOURN, FRANK. *Lex—Being the Biography of Alexander Devine, Founder of Clayesmore School.* London: Longmans, Green & Co., 1937. Pp. xii+288.

An extremely interesting account of a remarkable teacher and leader.

FRANCE

344. CLARK, FRANCIS I. *The Position of Women in Contemporary France.* London: P. S. King & Son, Ltd., 1937. Pp. 260.

Two of the chapters deal with the education of French women.

345. PIOBETTA, J.-B. *Le Baccalauréat.* Paris: J.-B. Baillière et Fils, Éditeurs, 1937. Pp. 1040+8.

M. Charléty, rector of the University of Paris, spoke of the French baccalaureate of secondary education which "honored among us, cursed by others, maltreated by universal opinion, has succeeded in surviving its adversaries and in becoming the most popular institution in France and one of the most characteristic traits of our national life." This valuable work is a comprehensive history of the baccalaureate from the time of its creation, about 1808.

FRENCH COLONIES

346. MUMFORD, W. BRYANT, and ORDE-BROWN, G. ST. J. *Africans Learn To Be French.* A Review of Educational Activities in the Seven Federated Colonies of French West Africa, Based upon a Tour of French West Africa and Algiers Undertaken in 1935. London: Evans Bros., Ltd., 1936. Pp. xii+174.

Written by two Englishmen who wished to have some outside standard by which successes or failures in the British territories might be measured.

GERMANY

347. BASON, CECILIA HATRICK. *Study of the Homeland and Civilization in the Elementary Schools of Germany.* Teachers College Contributions to Education, No. 710. New York: Teachers College, Columbia University, 1937. Pp. iv+166.

Traces the history and the purpose of *Heimatkunde* in the German elementary schools and tells of the special stress now being laid on it.

348. *Der deutsche Fachschulführer. Lebens- und Studienverhältnisse an den deutschen Fachschulen.* Studienjahr 1937: 1. Ausgabe. Berlin: Walter de Gruyter & Co., 1937. Pp. 136.

A handbook on German vocational and technical schools, including articles by various authors.

349. EDEL, FRITZ. *German Labor Service.* Terramare Publications, No. 6. Berlin: Terramare Office, 1937. Pp. 32.

The purposes of the Labor Service are to unite the youth of the nation into a real community and to free Germany from the necessity of importing food supplies. It is distinctly an organized educational movement, of which this pamphlet is a brief description.

350. GREAT BRITAIN BOARD OF EDUCATION. *Physical Education in Germany.* Educational Pamphlet No. 109. London: His Majesty's Stationery Office, 1937. Pp. 80.

The report of a delegation from Great Britain that visited Germany as guests of the German government in November, 1936, to investigate physical training.

351. REICHSTELLE FÜR SCHULWESEN, BERLIN. *Wegweiser durch das höhere Schulwesen des deutschen Reiches, Schuljahr 1936.* Berlin: Weidmannsche Verlagsbuchhandlung, 1937. Pp. 252.

A statistical survey of secondary education in Germany for the school year ending Easter, 1936

352. WILHELM, THEODOR, and GRAEFE, GERHARD. *German Education Today.* Berlin: Terramare Office, 1937 (second edition). Pp. 44.

The authors are attempting to "let the English-speaking world know what Germany is doing in the field of education, and why."

INDIA

353. AIYANGAR, N. KUPPUSWAMI. *The Teaching of Mathematics in the New Education.* Trivandrum: Sree Rama Vilas Press, 1938. Pp. 428+vi.

Discusses the questions: "Why do we teach mathematics?" and "What should we teach in mathematics?"

354. DAUDPOTA, U. M. *A Survey of Mass Education in India together with Practical Suggestions for the Extension of Adult Education in the Country.* Bombay: Sharafuddin & Sons, 1937. Pp. 114.

Discusses briefly the question of how to make education common and compulsory in a nation of about 350,000,000 persons, with over 90 per cent illiteracy.

355. *East India (Progress and Condition)—Statement Exhibiting the Moral and Material Progress and Condition of India during the Year 1934–35.* London: His Majesty's Stationery Office, 1937. Pp. 146.

Contains a chapter on health and education but is mainly valuable for the background in Indian economics, politics, and sociology which it affords.

356. *Education in India in 1934–35.* Delhi: Manager of Publications, 1937. Pp. 138.

This official, annual report is compiled from the reports of the directors of public instruction of the various provinces.

357. *Ninth Quinquennial Report on Public Instruction in Burma for the Years 1932–33 to 1936–37.* Rangoon: Superintendent, Government Printing and Stationery, 1938. Pp. 54+lxx.

Every five years the education authorities in India review the position of education and issue a report. This is the latest report for Burma.

358. *Report of the Vernacular and Vocational Education Reorganization Committee.* Rangoon: Government Press, 1936. Pp. 456.

The report of a thorough survey of the education provided for the thirteen millions of people in Burma. The recommendations are purposed to correct a condition which the committee describes as follows: "The most marked flaws of the existing educational provision are the unrelated and loosely related parts, the single-track curriculum of the Anglo-vernacular and English schools leading all pupils to the bottleneck of the high-school examination and entrance to the university and to a handful of higher technical and vocational institutions, the relative deadness and "dead-endedness" of the Vernacular school system, the virtual exclusion of Vernacular pupils from vocational and university education, the uncontrolled and ineffective system, for secular educational purposes, of many thousands of monastic schools, and the all-pervading bookishness and the dissociation of education generally from life and occupation."

IRISH FREE STATE

359. *Report of the Department of Education, 1935–36.* Dublin: The Stationery Office, 1937. Pp. 280.

The official annual report on education in the Irish Free State. The minister states that the outstanding developments of the year were a revision of the regulations on the tenure of primary teachers and a report on the reformatory and industrial schools made by a commission set up in 1934 to study the subject.

JAPAN

360. DEPARTMENT OF EDUCATION. *Education in Japan under the Department of Education, Administration and Work.* Tokyo: Department of Education, 1937. Pp. 44.

A graphic presentation in maps, charts, drawings, and tables of the present condition and growth of education in Japan. A companion publication to Item 361 in this list.

361. DEPARTMENT OF EDUCATION. *A General Survey of Education in Japan.* Tokyo: Department of Education, 1937. Pp. 124.

A handbook of factual information on education in Japan not including Korea, Formosa, and other dependencies. Presented in such a way as to give a clear general picture.

362. KEENLEYSIDE, HUGH LL. and THOMAS, A. F. *History of Japanese Education and Present Educational System.* Tokyo: Hokuseido Press, 1937. Pp. xiv+366.

A well-written, fairly complete treatment of the subject.

363. YOSHIDA, K., and KAIGO, T. *Japanese Education.* Tokyo: Board of Tourist Industry, Japanese Government Railways, 1937. Pp. 108.

A popular factual account of education in Japan.

POLAND

364. CHIEF BUREAU OF STATISTICS OF THE REPUBLIC OF POLAND. *Concise Statistical Year-Book of Poland, 1937.* Warsaw: Chief Bureau of Statistics, 1937. Pp. 354.

Contains detailed statistics of education and of intellectual life and culture.

PORTUGAL

365. A CORRESPONDENT. "Portuguese Schools," *London Times Educational Supplement*, No. 1,162 (August 7, 1937), 277.

A brief article summarizing the main characteristics of education in Portugal.

SCOTLAND

366. *Education (Scotland) Reports, &c., Issued in 1935–36.* Edinburgh: His Majesty's Stationery Office, 1936. Pp. (500) various paging.

The regular annual publication of the Scottish Education Department. Includes statistical, financial, and general reports for the year, as well as the statutory rules and orders, circulars and memorandums, leaving examination papers, and a directory of the education authorities.

SYRIA AND LEBANON

367. BABIKIAN, J. A. *Civilization and Education in Syria and Lebanon.* Beirut, Lebanon, Syria: American Press, 1936. Pp. 274.

A historical, comparative, and critical survey of the various educational systems in the several Syrian and Lebanese territories.

TURKEY

368. UGUREL, REFIA. *L'Éducation de la femme en Turquie.* Geneva: Georg & Cie, S.A., [1936]. Pp. 254.

The relatively recent emancipation of women in Turkey makes this work of unusual interest.

UNION OF SOUTH AFRICA

369. HEYWOOD, KATHERINE. *The Child—Learning and Living.* London: Longmans, Green & Co., 1937. Pp. x+192.

In this book Mrs. Heywood tells of the work that she does with children from four to twelve years of age in her private school, the Simonsberg Garden School, near Stellenbosch, Union of South Africa.

370. *Report of the Union Department of Education for the Calendar Year 1936.* Pretoria: Government Printer, 1937. Pp. 98.

In this report the secretary for education writes of the two years under review as having been marked by widespread, varied, and intense activity in the field of South African education. This publication is the Union report; each province also issues an annual statement.

371. TRANSVAAL EDUCATION DEPARTMENT. *Report for the Year Ended 31st December, 1936.* Pretoria: Government Printer, 1937. Pp. 272.

The regular annual official report on education in the Transvaal.

UNION OF SOVIET SOCIALIST REPUBLICS

372. FROLOV, Y. P. *Pavlov and His School—The Theory of Conditioned Reflexes.* New York: Oxford University Press, 1937. Pp. xx+292.

The author was in contact with Pavlov for twenty-three years. He is in a position to write authoritatively.

373. KING, BEATRICE. *Changing Man—The Education System of the U. S. S. R.* London: Victor Gollancz, Ltd., 1936. Pp. 320.

One of the best of the recent works on education in the Soviet Union.

YUGOSLAVIA

374. ROYAUME DE YOUGOSLAVIE, STATISTIQUE GÉNÉRAL D'ÉTAT. *Annuaire statistique, livre VI.* Belgrade: Imprimerie "Radenković," 1936. Pp. 474+ graphs.

The regular statistical annual, covering the year 1934–35. Contains data on education and culture.

Educational Writings

REVIEWS AND BOOK NOTES

An administrative theory derived from experience.—It is refreshing to find, now and then, a public-school administrator who possesses both the ability and the willingness to put into print his ideas about how a school should be conducted. Every school administrator is supposed to have a philosophy of administration, but most of them confess to a certain tremor at letting anybody know what it is. A recent issue from the press comes from the pen of Samuel E. Weber,[1] associate superintendent of schools in a large city. Clearly and tersely and without fear of intimidation, he explains how he believes schools should be administered. As stated in the Preface, the contents are "derived from many years of experience as a teacher, supervisor, and administrator, and from many sources of selected references such as those found at the end of each chapter" (p. 3).

The book is devoted wholly to the administration of personnel, and the problems are treated in five "unit-divisions." The emergence of the teaching profession is the topic of the first division; preparation of teachers is treated in the second division; and then follow, in order, discussions of certification and salaries, teaching personnel, and co-operative school supervision. The treatment is vigorous in style and possesses the validity and the virility which are likely to spring from the pen of one who lives with the concrete realities. On the other hand, it possesses the inconsistencies which are never lacking when educational theory springs almost wholly from practice. Most of the problems that are prominent in the field of personnel, especially those peculiar to large systems, are discussed, and many practical suggestions for dealing with them are set forth.

The point of view toward administration can probably best be expressed in the author's own words:

> The leader of the group is the superintendent of schools who has a philosophy of education which he promulgates through the medium of his co-workers. The whole program of supervision should grow out of this philosophy. Maximum results can be accomplished only if it is clearly understood and wholeheartedly subscribed to by every-

[1] Samuel E. Weber, *Cooperative Administration and Supervision of the Teaching Personnel.* New York: Thomas Nelson & Sons, 1937. Pp. 384.

one in the instructional personnel. To insure unity the special function of members should be clearly defined and properly co-ordinated with all others [p. 265].

This pronouncement, as is true of others in the book, will grate harshly on the sensitive nerves of high-minded theorists, but it probably reflects realistically the viewpoint of most present-day administrators. This philosophy is to be passed down through the "line officers," who "include the superintendent, associates, assistant superintendents, principals, and department heads. The official activities of each extend to the teacher in the classroom" (p. 282).

The reader may or may not like the point of view, but he will like the direct character of the discussion. The materials are worthy of being read by all who have interest in personnel problems. Theorists in school administration will also find food for thought because of the frank advocacy of certain practices about which theorists enjoy debating.

J. M. HUGHES

NORTHWESTERN UNIVERSITY

An orientation course for teachers.—What should constitute the contents of a college orientation course for teachers? Two recent books[1] give answers to this question. That the answers are by no means identical is reflected in the differing treatment to be found in the two publications.

The authors agree on the inclusion of the following topics: relation of education to the social order; the philosophy of education; nature of learning; different kinds of learning outcomes; teaching techniques; types of schools and the character of their organization; cost, support, and control of education; personal and professional qualifications of teachers; ethics of the teaching profession; opportunities in the teaching profession; and steps to be taken in securing a teaching position.

They disagree on the importance to be attached to other topics. Reeder places more emphasis on the following: extra-curriculum activities, which he prefers to label "extra-class" activities; selection and use of textbooks; school library; improving and using the school plant; guidance movement in education; use of science in education; directed observation of teaching; techniques for improving the teacher in service; and techniques for constructing the curriculum. Skinner and his associates, on the other hand, devote significantly more attention to these aspects: philosophy of education; historical approach to the treatment of the topics considered in their volume; relation of the school to the community; measurement of learning outcomes; and statistics (this topic is relegated to the Appendix).

Because of the tremendous scope of the field of education, writers must make

[1] *a*) Ward G. Reeder, *A First Course in Education.* New York: Macmillan Co., 1937. Pp. xvi+720. $2.75.

b) *An Introduction to Modern Education.* Edited by Charles E. Skinner and R. Emerson Langfitt. Boston: D. C. Heath & Co., 1937. Pp. xvi+492. $2.80.

a choice, not only of the areas to be given consideration in an orientation course for teachers, but also of the manner of treating each of the areas selected. Reeder leans in the direction of presenting a mass of data; Skinner and Langfitt more toward a philosophical treatment. The latter approach has merit, since students interested in teaching should be given a large perspective of the vocation that they are planning to enter; but inadequate understandings are likely to result when complex ideas are not carefully explained. The following quotations from the Skinner and Langfitt book are illustrative:

. . . . a functional interpretation of secondary education has been evolving [p. 49].

. . . . the school system of the United States did not develop either as a completely indigenous institution . . . . or as an articulated whole [p. 51].

The insistent, driving urges of man's nature, however, cannot be denied as human beings blunder on toward self-realization [p. 63].

Toward the end of the volume by Skinner and his collaborators, a chapter entitled "The Philosophy of Education" is presented, wherein the student is led to reflect on naturalism, realism, idealism, pragmatism, and experimentalism. These discussions, in turn, are pointed toward a consideration of what constitutes a desirable society.

The reviewer found both volumes well organized, carefully edited, and interesting. He wonders, however, in view of the tremendous amount of material that a student is required to assimilate, whether writers of the typical textbooks in orientation in education are not guilty of erring in the very direction criticized by one of the contributors to the Skinner and Langfitt volume when he deplores the bookishness of the modern school and states that education is being defined in terms of "knowledge rather than power to do" (p. 66). A survey course may advantageously serve either of two purposes: an introduction to a field or a summary. It would seem that the contents of the course should not be identical in the two instances. When used for introduction purposes, the course should build a basic structure or pattern which can give a clear meaning to the later learnings in the field. When used as a summary, the details that have been learned may be emphasized to show how these fit into the general pattern. It appears to the reviewer that the usual textbook designed for orientation courses in education could serve an integrating function at the end of the student's professional education more effectively than they can serve as an introduction at the beginning, when it is necessary that an interest in the new field be generated.

HERBERT T. OLANDER

UNIVERSITY OF PITTSBURGH

The improvement of objective tests and of marking systems.—Rinsland's book,[1] in the words of the author, "is designed to teach students of education and

[1] Henry Daniel Rinsland, *Constructing Tests and Grading in Elementary and High School Subjects*. New York: Prentice-Hall, Inc., 1937. Pp. xvi+324. $2.85.

teachers the methods of building reliable and valid objective tests, better methods of grading subjective examinations than those usually employed, and the use of a grading system that is reliable, valid, and comprehensive" (p. vii). The first seventeen pages contain a discussion of the need for objective tests, in which the author adds to the familiar evidence of unreliability in examination and school marks some similar data collected by himself. The bulk of the book (more than two hundred pages) consists of collections of sample test items of various types, including items from many fields of subject matter in both the elementary and the high school. The items of each of the major types are introduced by a brief set of rules for constructing items of that type. About forty pages are devoted to a discussion of the improvement of marks and marking systems, particularly to the method of assigning letter marks to test scores on the basis of the standard deviation of the distribution. In this section the author describes and recommends a scale which he has devised for expressing raw scores in comparable terms. This "R scale" differs in no essential respect from the familiar T scale and seems a totally unnecessary addition for students already acquainted with the latter scale. The last section of the book (about forty pages) presents a discussion of the concepts of validity and reliability, describes the procedures for computing reliability coefficients and other statistical measures, and comments briefly on the general advantages and the limitations of objective tests.

There is a very real need for a book on test construction that is definitely organized for instructional purposes for use with beginning students of education. In the reviewer's opinion, however, this book falls far short of supplying that need. The major limitation of the book, judged in relation to its intended purpose, is that it will fail to develop in the student any critical attitude toward prevalent tests and techniques of test construction. The rules presented for building test items are, in nearly all instances, sound but are concerned almost exclusively with the more mechanical aspects of item construction. Little, if any, help is offered the student in dealing with the far more important problems of improving test validity through clarification and analysis of the ultimate objectives of both teaching and testing, through a redistribution of emphasis with reference to these objectives, and through attempts to measure more directly the *functional* values of what has been learned rather than the verbal form in which it has been acquired. Teachers employing this book as a sole guide in test construction are likely to be primarily concerned with the *form* of individual items and not sufficiently concerned with *what is being measured* by the items individually and collectively.

The idea of teaching test construction by providing numerous illustrations of actual test items is a good one, but the collections of test items presented in this book are noteworthy for the large number of types of items and fields of subject matter represented rather than for quality. The book would have been much improved if the author had analyzed in detail and had evaluated criti-

cally a much smaller number of items selected because they represented promising attempts to measure important objectives frequently neglected in objective tests or because they illustrated some common weakness in test construction, such as the tendency to place an undue premium on the rote learning of stereotyped verbalizations.

The discussion of methods of assigning letter marks to test scores is also likely to encourage an uncritical use of these arbitrary procedures, without due appreciation, particularly, that no method of marking based on internal standards can possibly make letter marks comparable for groups which are not at the same level and equally variable in whatever is being measured.

E. F. LINDQUIST

STATE UNIVERSITY OF IOWA

The bases of modern elementary-school procedures.—The student of elementary education must be conversant with the historical basis of elementary-school subject matter, its aims, and the experimental researches which bear on its problems. Gray[1] attempts to make available in epitomized form the best thought and research on the following school subjects: reading, handwriting, arithmetic, spelling, language, social studies, fine arts, physical education, and health. Elementary-school teachers will find in this book, for each of these subjects, summaries of the better studies of aims and experimental analyses relating to (1) problems, (2) best methods, (3) diagnosis and remedial teaching, and (4) measurement. Students who are somewhat disturbed by the philosophical and theoretical approach of many of their textbooks will be pleased with Gray's careful dependence on experimental study.

In general, the discussion of each subject is opened with a brief history of that subject's development. The historical background is followed by a summary of present aims, based on surveys, modern courses of study, and authoritative opinion. The author then continues with a psychological analysis, based on researches, of the abilities to be acquired. Social needs, courses of study, and job analyses furnish the evidence for desirable content. Control-group studies furnish much of the material on problems of method. Analytical studies of pupils' work, check lists of teachers' reports, and the like bring out types of pupil difficulties. Summaries are presented of many experimental studies relating to individual differences which affect rate and degree of learning. Each chapter includes a discussion of modern methods of diagnosing and measuring, with suggestions on types of tests and scales. Brief résumés appear at the ends of the sections in each chapter.

There are no exercises, questions, suggested readings, or other teaching aids at the ends of the chapters and none at the end of the book. Nevertheless, the book is admirably suited for furnishing information to, and provoking the

[1] William Henry Gray, *Psychology of Elementary School Subjects*. New York: Prentice-Hall, Inc., 1938. Pp. xii+460. $3.25.

thought of, students who are expecting to teach in the elementary field. It is also an excellent source book for those already teaching. The résumés seem too brief to give a real appreciation of the content, although they are of value in helping to review the content or in locating particular material which one may wish to consult. There are a detailed table of contents and an adequate subject index. Throughout the book appear footnote references to the numerous studies cited.

JOHN D. LAWTHER

PENNSYLVANIA STATE COLLEGE

Supervision of student teaching.—Those who are responsible for the training of elementary-school teachers have long been concerned about the best arrangement of subject matter, professional courses, and practice teaching. The book here reviewed[1] is an attempt at analysis and evaluation of the practices in the normal schools of New York State, with special reference to supervision of student teaching. The six chapters are concerned with the historical background, the nature of the study, guiding concepts underlying supervision of student teaching, practices in supervision, analysis of activities, and conclusions and recommendations.

A check list of supervisory activities "that are or should be carried on with the student teachers" was prepared from the literature on the subject. This check list was then sent to supervisors of student teachers in the teacher-training schools in New York State. The supervisors were requested to check, for each item on the list, the activities performed, their relative importance, the relative difficulty of achieving them, and the type of school (campus or co-operating) in which each supervisory activity could best be realized. The list was also sent to student teachers who were requested to check, for each item, the degree of helpfulness, the degree of difficulty of achievement, and the supervisory helps which were deemed important or necessary but which were not received.

From responses to these check lists the author draws certain conclusions which he uses as bases of recommendations for the improvement of supervisory activities. He places great emphasis on the co-ordination of professional and subject-matter courses with practice teaching and demonstration. Such unification will result, he thinks, in minimizing duplication, overlapping, and conflict of policies. A detailed and closely supervised teacher-training course would be the outcome of the application of these recommendations.

Obviously the validity of the conclusions and recommendations depends, first, on the validity of the concepts underlying the items in the check list and, second, on the validity of the opinions of the supervisors and the students re-

[1] Edward S. Mooney, Jr., *An Analysis of the Supervision of Student Teaching: A Study Based on the New York State Teacher-Education Institutions for the Preparation of Elementary-School Teachers.* Teachers College Contributions to Education, No. 711. New York: Teachers College, Columbia University, 1937. Pp. viii+160.

sponding. Mooney has performed a service in reporting the problems and the practices in the group of schools investigated. The thoughtful administrator of a normal school who reads the book may well wonder, however, whether such detailed concern with the minutiae of student teaching will not be robbing Peter to pay Paul. If every detail of the subject matter and professional courses must be exemplified in practice teaching, the added time requirements will necessitate extensive elimination or condensation of such courses.

Mooney recognizes the fact that student teachers differ in their needs and abilities. This fact suggests the possibility of reducing such differences by a more rigid selection at entrance to the normal school on the basis of aptitude and previous achievement. Such selection, in turn, would have a beneficial effect on the amount of vicarious learning that could be done. As long as teacher-training schools admit students with eighth-grade achievement, the reviewer questions whether any amount of methods, demonstration, and practice teaching will transform them into teachers.

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An eclectic introduction to child development.—The child-study movement has grown to such proportions in recent years that it already embraces a large section of the field of human psychology. The scientific and the practical claims in this area are so crucial that a variety of treatises are essential to satisfy the demands of all concerned. The strictly scientific efforts of research workers are reported in intensive and technical studies of child behavior. The practical interests of persons whose task is the actual management of children require the presentation of specific advice in child care. Somewhere between these two types of publications is a place for a comprehensive introduction to the personality development of children which is not too technical but which is, nevertheless, based on the best research and thought in the field. This latter function is embodied in Chave's book on child development.[1]

The objective of the author is well stated in the following excerpt from the Preface.

> The author has attempted to make a topographical survey of the field as a whole, to mark the outstanding mountain peaks, and to indicate some of the resources in the fertile land of child life. An educator needs to know something of the discoveries of biologists, psychologists, and social psychologists, as well as developments in the fields of ethics, religion, and education. It is impossible for educators to accept full responsibility for integrating and correlating findings from such a rich and varied body of sources. If a good educational philosophy is to be developed with respect to character and personality, and if practical assistance is to be given to those responsible for counseling in the involved problems of developing child life, frequent conferences and

[1] Ernest J. Chave, *Personality Development in Children.* Chicago: University of Chicago Press, 1937. Pp. xiv+354. $2.50.

co-operative studies of workers in different fields must be arranged. This book is intended primarily to serve educators, students in preparation for teaching, workers in the field of child guidance, and that increasing group of parents who are reading widely in child psychology [p. x].

The content and the distribution of emphasis in the book may be seen in the following titles and the percentage of space devoted to each: Chapter i, "How Personality Grows," 6 per cent; chapter ii, "The Part Heredity Plays," 6 per cent; chapter iii, "The Organic Basis," 7 per cent; chapter iv, "Intellectual Factors," 8 per cent; chapter v, "Dynamic Factors," 6 per cent; chapter vi, "Play and Playmates," 8 per cent; chapter vii, "Home Influences," 6 per cent; chapter viii, "School Experiences," 9 per cent; chapter ix, "Growth in Moral Discrimination," 7 per cent; chapter x, "Significance of Religion," 7 per cent; chapter xi, "The Handicapped Child," 6 per cent; chapter xii, "Maladjustments," 8 per cent; chapter xiii, "Methods of Studying Personality in Children," 7 per cent; and chapter xiv, "Integration through Community Co-operation," 6 per cent.

In general, the reviewer would appraise the book as a middle-of-the-road synthesis of many of the objective facts and major viewpoints concerning childhood organized around a conventional but wide-ranging list of topics. A check of the references at the ends of the chapters shows that a great majority of the bibliographical items have appeared since 1925 and that they are well distributed among the leading research monographs and the more reliable general treatises. This fact and the accompanying text indicates that the author possesses an ample familiarity with the current literature in the field, which he evaluates critically and applies wisely.

While the discussion is competent throughout the book, the author exhibits the greatest skill in the chapters dealing with the moral and the religious development of children. As a whole, the presentation constitutes a gratifying orientation in the field of child psychology for teacher, clergyman, professional worker with children, and intelligent parent. Its main feature, however, a characteristic which sets it off from most of the literature in the same field, is the frank recognition and treatment of the moral and religious growth of normal children. Because of its excursion into this neglected but vital area of human experience and because of its balanced and comprehensive eclecticism, this book deserves much commendation as an introduction to the study of child development.

HOWARD YALE MCCLUSKY

UNIVERSITY OF MICHIGAN

An intended practical guide for teachers of social-science content in the elementary school.—In recent curriculum-making in the elementary school, the material concerned with social living has become so closely related to all the other materials in the curriculum that to segregate and describe it and to tell teachers how to teach it is almost beyond the realm of possibility and, according to one school

of thought, should not be done. Even so, an attempt[1] has been made to segregate the material concerned specifically with social living and to offer some assistance to those who teach it. In the selection and the presentation of the content of the volume, the author's chief concern, as the reader is told in the Preface, is to be helpful in a practical way. Theory is relegated to a minor place in the discussion, the chief emphasis being placed on the double theme: (1) the nature of the material and (2) methods of procedure.

In his attempt to help the teacher in a practical way, the author tells how the work of social study should be considered, how the social-science course has evolved, what constitutes social-science material, what the aims of social study are, how to build a course of study, how to plan and use stories in social study, how to motivate the lesson, how to make and use lesson plans, how to build a social-science project, how to use literature in social study, and how to test for results. In his discussion of each of these aspects of material and methods, the author does not rely on words alone to convey his message. To make his abstract statements objective and real, he furnishes a multitude of concrete examples for the reader, who is not only told how to do something but is shown how it looks when it is done.

To some readers the volume will lack the flavor of progressivism. To others it may seem a bit reactionary. The author himself considers it conservative. Whatever its general flavor, it will not be a waste of an ambitious teacher's time to read it with care and to give heed to many of its suggestions.

R. M. TRYON

A broader field for social studies in the elementary school.—Two new books attempt to answer the problem of what shall be the content of the social-studies work for the elementary school. A bit of description of social and industrial life is contained in a book[2] intended for the lower grades, in which are presented types of homes and the work of various crafts. Many homes are described: the village home; several kinds of farm homes and the work on those farms; the hotel; and homes near the mine, the sea, and the river. The characteristics of the happy family and the ideals of law and order and of safety and health are presented appealingly. The book is attractively made up and has many beautiful illustrations, some of them in color. An excellent word list and a helpful bibliography are given. The book was tried in a second grade but seemed better fitted for the third grade, where the children were delighted with its attractive style and interesting descriptions. These led to many questions and new lines of thought. The publication will be welcomed either as a basic textbook or as a supplementary reader.

[1] John Schwarz, *Social Study in the Elementary School.* New York: Prentice-Hall, Inc., 1938. Pp. xiii+216. $2.25.

[2] John F. Waddell, Lois Gadd Nemec, and Maybelle G. Bush, *Helpers.* New York: Macmillan Co., 1937. Pp. vi+216. $0.96.

Another book[1] is the seventh of a series for the elementary grades which discuss the evolution of simple nature peoples into communities and states and describe man's social and industrial activities to the present day. The units in this volume are concerned with the following topics: the character of man's homes, churches, and other public buildings (including primitive as well as modern construction, decorating, and furnishing); the origin and growth of the theater (including opera, the vaudeville, motion pictures, and radio); music, poetry, the ballet and other dances; the origin of language, writing, and printing (including an interesting description of the preparation of the manuscript and the printing and binding of the book under review); how man invented numbers and measurement; and the measurement of time and the invention of clocks and the calendar. All these activities represent the effort of man to express himself in the arts and crafts. Much emphasis is placed on man as a creative individual and on the importance of creative thinking. The authors are impatient with Americans in that they have done so little in creative art, that they are still imitators. The material of this volume has been prepared for the first half of the sixth grade, and the reviewer wonders whether pupils of that age are ready to crowd so much into one semester and to criticize understandingly the modern arts.

The style is attractive and absorbing. The book is well illustrated and has many supplementary reading references. A workbook has been prepared to accompany the textbook. Many may disagree with this method of fusion of the social-studies field into one course, but, after reading this volume, no teacher would refuse to include it in his supplementary reading library.

W. H. HATHAWAY

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Geographical principles for the junior high school.—In an effort to depart from tradition and to produce a new kind of textbook in geography for Grades VII and VIII, a university professor of geography and a classroom teacher in junior high school have collaborated on a book entitled *Exploring Geography.*[2] The title suggests an exploration of regions, but, instead, the book takes the reader to an exploration in the realm of geographical abstractions, upon ground which is controversial among leaders of geographical thought. The first three units consider how man learns to use the environment to serve his needs, how modern man has changed his environment to serve his needs, and how different environments cause unequal growth of nations. In the pursuit of such abstract understandings there is danger that seventh- and eighth-grade pupils may gain

[1] Harold Rugg and Louise Krueger, Man and His Changing Society: Vol. VII of the Elementary School Course, *Man at Work: His Arts and Crafts.* Boston: Ginn & Co., 1937. Pp. vi+568. $1.28.

[2] Mabel B. Casner and Roderick Peattie, *Exploring Geography.* New York: Harcourt, Brace & Co., 1937. Pp. x+482. $1.96.

habits of careless observation, hasty generalization, and fragmentary explanation. However, the principles involved are amplified in the next three units through their application to the United States: "Agricultural Environments Have Contributed to the Strength of the United States," "Forest, Power, and Mineral Resources Help Make the United States a Strong Nation," and "Geography Largely Determines the Location of Basic Industries." The last title undoubtedly would cause "word trouble" among geographers, for agreement on its meaning would be difficult to secure. Three units on the trade relations of the United States with the rest of the world conclude the book.

Each of the nine units is divided into two or three problems. Each problem opens with a "dramatic episode," which the authors suggest should be read aloud. The dramatic episodes in many cases fail to present data which would challenge the child's curiosity, and as a result the discussion questions which follow are somewhat forced. The next step provided for problem-solving is a list of new words to be looked up before the text material is read. After the text material comes a section labeled "activities." The authors say that they designed enough activities so that each member of the class may have one of his own. There are approximately four hundred activities for the nine units. Exercises in the making of maps and graphs are provided in great variety. Dramatizations, shadow plays, essays, models on a sand table, posters, and collecting contests are suggested. References to geographical books and to statistical sources are incorporated in various activities. A list of books for leisure reading is given at the close of each problem. An appendix of sixteen pages gives specifications for building models of ships, railroads, bridges, farm scenes, and tenement buildings.

Maps are plentiful but variable in quality. Many have been scientifically constructed, but some are the work of non-cartographers who take great liberties with coast lines, rivers, and cities. These imaginative maps show no scales, no latitude nor longitude, and few boundary lines for identification purposes. At the close of the book is an array of continental maps, political and physical. The political maps are of the archaic pink, yellow, and green patchwork type. The physical maps in grayish shadows are of the very simple type recommended for fourth-grade pupils.

The volume is profusely illustrated. A picture for every page seems to be the rule. There are many geographic photographs of high quality, but there are some which are a waste of space, for example, a pyramid of canned vegetables flanked by bottles of catsup.

Careless workmanship is evident here and there in the volume. Inaccuracies, inconsistencies, and inappropriate wording are illustrated by the following selections: "The boats which carry iron ore [on the Great Lakes] are the longest boats in the world" (p. 268). "Potash is lacking in our country" (p. 352). "Much of our salmon comes from the waters of British Columbia" (p. 345). "All farming done in Utah is done by irrigation" (p. 185). "These grassy plains [the Argentine pampa] were originally used for the grazing of cattle and sheep. Today they are

farmed for wheat for man and corn as feed for cattle" (p. 449). "In Argentina . . . . wheat is harvested and cattle are slaughtered in the autumn, before expensive winter feeding begins" (p. 440). ". . . . a vast East Indian empire inhabited by softer people" (p. 131). ". . . . this far from sweet old continent of Asia . . . ." (p. 405). ". . . . whale of a big drummer's trunk" (p. 215). "Soil is mostly loose rock" (p. 16). "Italy must satisfy her wants by commerce. She needs first rainfall, and second, coal" (p. 384). Hollywood, California, is listed under "Some Nongeographical Industrial Locations" on page 299, but on page 335 appears, "Los Angeles. . . . . Its sunshine was the chief factor in the development there of the moving-picture industry." On one map (p. 69) the Argentine pampa is located in Patagonia, and on another map (p. 141) Patagonia is designated as a desert.

MARGUERITE UTTLEY

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BITTERMANN, HENRY J. *State and Federal Grants-in-Aid.* Chicago: Mentzer, Bush & Co., 1938. Pp. x+550. $4.00.

BLAIR, HERBERT. *Physical Educational Facilities for the Modern Junior and Senior High School.* New York: A. S. Barnes & Co., 1938. Pp. xii+174. $2.50.

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BRODERICK, G. E. P. *Notes on General Science.* New York: Longmans, Green & Co., 1938. Pp. 64. $0.35.

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STEPHENSON, MARGARET B., and MILLETT, RUTH L. *How Do You Do.* Bloomington, Illinois: McKnight & McKnight, 1938. Pp. 32. $0.25.

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Experimental Curriculum in the Santa Barbara City Schools. Integrative Theme: Guiding Youth in Living Effectively in Their Behavioral Environment throughout Thirteen Years: Kindergarten through Grade XII. Santa Barbara, California: Board of Education, 1938. Pp. 80. $0.50.

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